H780-14

102d Congress, 1st Session - - - - - - - - - - - - House Document 102-90

iv+ 56p ill.

60p

1991 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND

COMMUNICATION

FROM

THE BOARD OF TRUSTEES, FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND

TRANSMITTING

THE 1991 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND, PURSUANT TO 42 U.S.C. 1841(b)

996-A;
996-B

Y1.1/7:102-90.

MAY 22, 1991.—Referred to the Committee on Ways and Means and Energy and Commerce, and ordered to be printed

---

U.S. GOVERNMENT PRINTING OFFICE

49-011 WASHINGTON : 1991

6/5

1991 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND

COMMUNICATION

From

THE BOARD OF TRUSTEES, FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND

Transmitting

THE 1991 ANNUAL REPORT OF THE BOARD, PURSUANT TO SECTION 1841(b) OF THE SOCIAL SECURITY ACT AS AMENDED

LETTER OF TRANSMITTAL

BOARD OF TRUSTEES OF THE
FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND
Washington, D.C., May 17, 1991

HONORABLE THOMAS S. FOLEY
Speaker of the House of Representatives
Washington, D.C.

HONORABLE DAN QUAYLE
President of the Senate
Washington, D.C.

GENTLEMEN:

We have the honor of transmitting to you the 1991 Annual Report of the Board of Trustees of the Federal Supplementary Medical Insurance Trust Fund (the 26th such report), in compliance with the provisions of section 1841(b) of the Social Security Act.

Respectfully,

NICHOLAS F. BRADY,
Secretary of the Treasury, and
Managing Trustee of the Trust Fund

LYNN MARTIN,
Secretary of Labor, and Trustee

LOUIS W. SULLIVAN, M.D.,
Secretary of Health and
Human Services, and Trustee

STANFORD G. ROSS,
Trustee

DAVID M. WALKER,
Trustee

GAIL R. WILENSKY, Ph.D.,
Administrator of the Health Care
Financing Administration,
and Secretary, Board of Trustees

CONTENTS

EXECUTIVE SUMMARY 1

THE BOARD OF TRUSTEES 7

SOCIAL SECURITY AMENDMENTS SINCE THE 1990 REPORT 8

NATURE OF THE TRUST FUND 11

SUMMARY OF THE OPERATIONS OF THE TRUST FUND, FISCAL YEAR 1990 . . 14

EXPECTED OPERATIONS AND STATUS OF THE TRUST FUND 19

ACTUARIAL STATUS OF THE TRUST FUND 25

CONCLUSION 31

APPENDIX A 32
ACTUARIAL METHODOLOGY AND PRINIPAL ASSUMPTIONS FOR COST ESTIMATES FOR THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM

APPENDIX B 48
STATEMENT OF ACTUARIAL ASSUMPTIONS AND BASES EMPLOYED IN DETERMINING THE MONTHLY ACTUARIAL RATES AND THE MONTHLY PREMIUM RATE FOR THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM BEGINNING JANUARY 1991

APPENDIX C 56
STATEMENT OF ACTUARIAL OPINION

1991 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND

EXECUTIVE SUMMARY

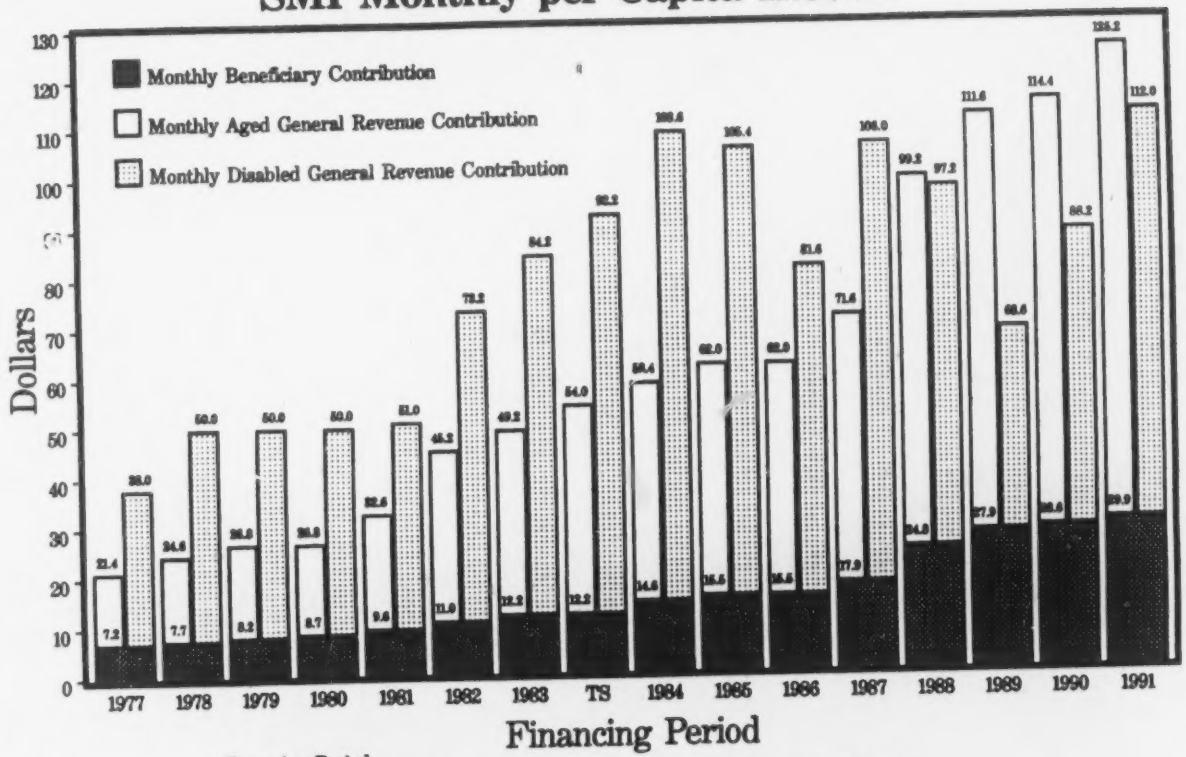
The supplementary medical insurance (SMI) program pays for physician services, outpatient hospital services, and other medical expenses for both aged 65 and over and for the long-term disabled. In calendar year (CY) 1990, 32.5 million persons were covered under SMI. General revenue contributions during 1990 amounted to $33.0 billion, accounting for 72.0 percent of all SMI income. About 24.7 percent of all income resulted from the premiums paid by the enrollees. Interest payments to the SMI fund accounted for the remaining 3.3 percent. Of the $44.0 billion in SMI disbursements, $42.5 billion was for benefit payments while the remaining was spent for administrative expenses. SMI administrative expenses were 3.5 percent of total disbursements.

The SMI program essentially is yearly renewable term insurance financed from premium income paid by the enrollees and from income contributed from general revenue. This means that the SMI program is financed on an accrual basis with a contingency margin, and, therefore, the SMI trust fund should always be somewhat greater than the claims that have been incurred by enrollees but not yet paid by the program. The trust fund holds all of the income not currently needed to pay benefits and related expenses. The assets of the fund may not be used for any other purpose; however, they may be invested in certain interest-bearing obligations of the U.S. Government.

Financing for the SMI program is established annually on the basis of standard monthly premium rates (paid by or on behalf of all participants) and monthly actuarial rates determined separately for aged and disabled beneficiaries on which general revenue contributions are based. Prior to the 6-month transition period (July 1, 1983 through December 31, 1983), these rates were applicable in the 12-month periods ending June 30. Beginning January 1, 1984, the annual basis was changed to calendar years. Monthly actuarial rates are equal to one-half the monthly amounts necessary to finance the SMI program. These rates determine the amount to be contributed from general revenues on behalf of each enrollee. Based on the formula in the law, the Government contribution effectively makes up the difference between twice the monthly actuarial rates and the standard monthly premium rate. Figure 1 presents these values for financing periods since 1977. This figure clearly indicates the extent to which general revenue financing is the major source of income for the program.

Figure 1

SMI Monthly per Capita Income*



Financing Period:
For periods 1983 and earlier, the financing period is July 1 through June 30.
Transitional semester (TS), the financing period is July 1, 1983 through December 31, 1983.
For 1984 through 1991 the Financing Period is January 1 through December 31.

*The amounts shown do not include the catastrophic coverage monthly premium rate for 1989.

Operations of the SMI Program

Historical and projected operations of the fund through 1993 are shown in Tables 5 and 6 in this report. As can be seen, income has exceeded disbursements for most of the historical years. The financing for CY 1991 was established to reduce assets. However, the Omnibus Budget Reconciliation Act of 1990 (OBRA 90, Public Law 101-508) was passed November 5, 1990 after the CY 1991 financing had been established. As a result, in CY 1991, income is again projected to exceed disbursements, and the trust fund balance is projected to increase through CY 1991.

The financial status of the program depends on both the total net assets and liabilities. It is, therefore, necessary to examine the incurred experience of the program, since it is this experience that is used to determine the actuarial rates discussed above and which forms the basis of the concept of actuarial soundness as it relates to the SMI program.

Actuarial Soundness of the SMI Program

The concept of actuarial soundness, as it applies to the SMI program, is closely related to the concept as it applies to private group insurance. The SMI program is essentially yearly renewable term insurance financed from premium income paid by the enrollees, from income contributed from general revenue, and from interest payments on the trust fund assets.

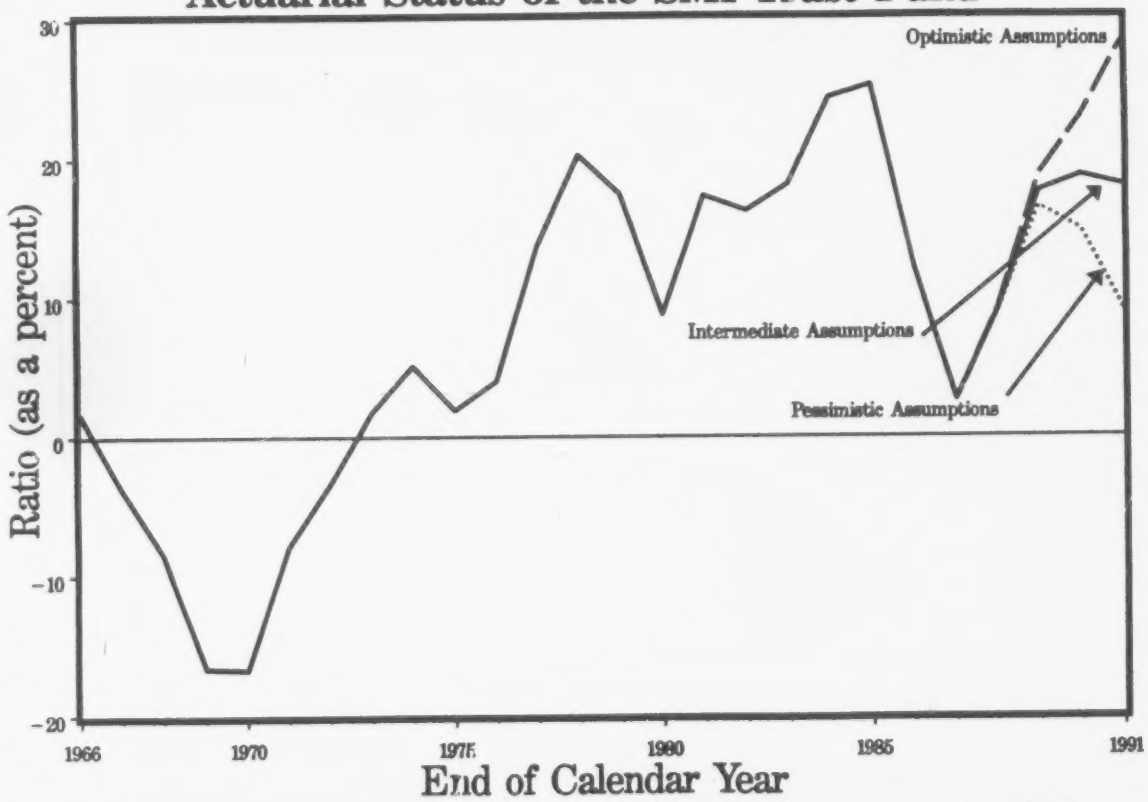
In testing the actuarial soundness of the SMI program, it is not appropriate to look beyond the period for which the enrollee premium rates and level of general revenue financing have been established. The primary tests of actuarial soundness, then, are that: (1) assets and income for years for which financing has been established be sufficient to meet the projected benefits and associated administrative expenses incurred for that period and (2) assets be sufficient to cover projected liabilities that will have been incurred by the end of that time but will not have been paid yet. Even if these tests of actuarial soundness are not met, the program can continue to operate if the trust fund remains at a level adequate to permit the payment of claims as presented. However, to protect against the possibility that cost increases under the program will be higher than assumed, assets should be sufficient to cover the impact of a moderate degree of variation between actual and projected costs.

The primary tests for actuarial soundness and trust fund adequacy can be viewed by direct examination of absolute dollar levels. In providing an appropriate contingency or margin for variation, however, there must also be some relative measure. The relative measure or ratio used for this purpose is the ratio of the assets less liabilities to the following year's incurred expenditures. Figure 2 shows this ratio for historical years and for projected years under the intermediate assumptions (alternative II), as well as high (pessimistic) and low (optimistic) cost sensitivity scenarios.

As mentioned earlier, financing for CY 1991 was established to reduce assets. However, Public Law 101-508 was passed November 5, 1990 after the CY 1991 financing had been established. As a net result, the excess of assets over liabilities is expected to increase by December 31, 1991.

Figure 2

Actuarial Status of the SMI Trust Fund



Note: The actuarial status of the SMI trust fund is measured by the ratio of the end of year surplus or deficit to the following year incurred expenditures.

Conclusion of the Board of Trustees

The financing established through December 1991 is sufficient to cover projected benefits and administrative costs through that time period. This financing is sufficient to maintain a level of trust fund assets which is adequate to cover the impact of a moderate degree of variation between actual costs and projected costs. The SMI program can thus be said to be actuarially sound.

Although the SMI program is actuarially sound, the Board notes with concern the rapid growth in the cost of the program. Growth rates have been so rapid that outlays of the program have nearly doubled in the last 5 years. For the same time period, the program grew 37 percent faster than the economy as a whole. This growth rate shows little or no sign of significantly abating despite recent efforts to control the cost of the program, including the recent changes enacted in OBRA 90. The Board recommends that Congress continue to work to curtail the rapid growth in the cost of the SMI program.

THE BOARD OF TRUSTEES

The Federal Supplementary Medical Insurance Trust Fund, established on July 30, 1965, is held by the Board of Trustees under the authority of section 1841(b) of the Social Security Act, as amended. The Board is composed of five members, three of whom serve in an ex officio capacity: the Secretary of the Treasury, the Secretary of Labor, and the Secretary of Health and Human Services. The President nominated and the Senate confirmed Stanford G. Ross and David M. Walker to be the other two members, who serve as representatives of the public. Mr. Ross and Mr. Walker are serving 4-year terms that began on October 2, 1990.

By law, the Secretary of the Treasury is designated as the Managing Trustee, and the Administrator of the Health Care Financing Administration is designated as Secretary of the Board. The Board of Trustees reports to the Congress each year on the operation and status of the trust fund, in compliance with section 1841(b)(2) of the Social Security Act. This annual report, for 1991, is the 26th such report.

SOCIAL SECURITY AMENDMENTS SINCE THE 1990 REPORT

Since the 1990 Annual Report was transmitted to Congress, the Omnibus Budget Reconciliation Act of 1990 (OBRA 90, Public Law 101-508) affecting the SMI program (also known as Medicare Part B) was enacted on November 5, 1990. The more important legislative changes, from a financial standpoint, are:

(1) Premium rates are established for five years: $29.90 in 1991; $31.80 in 1992; $36.60 in 1993; $41.10 in 1994; and $46.10 in 1995.

(2) Effective January 1, 1991, the Part B deductible is increased from $75 to $100.

(3) The prevailing charge update for physician services in 1991 is 2 percent for primary care services and 0 percent for all other services. Customary charges for 1991 are updated for primary care services and frozen for all other services. Effective January 1, 1991, the prevailing charge floor for primary care services is raised to 60 percent of the national weighted average prevailing charge. However, this change in the prevailing charge floor will not be considered in determining the conversion factor for 1992. For 1992, the increase in the default update indices for services on the fee schedule will be reduced by 0.4 percentage points.

The Medicare Volume Performance Standard (MVPS) for fiscal year (FY) 1991 is the sum of two terms reduced by 2 percentage points. The terms are the estimate of the percentage that incurred reimbursement for physician services for FY 1991 exceed the incurred reimbursement for these same services in FY 1990, ignoring the impact of provisions of OBRA 90, and the estimate of the percentage change in the incurred reimbursement for this category of services in FY 1991 (compared with FY 1990) resulting from OBRA 90.

(4) OBRA 90 continues the Omnibus Budget Reconciliation Act of 1989 (OBRA 89, Public Law 101-239) reduction of overvalued procedures through 1991 and specifies the reduction for an additional list of procedures. OBRA 89 specified that certain procedures which are overpriced by at least 10 percent be reduced in payment. The amount of the reduction equals one-third of the difference between the 1989 prevailing charge amount and the locally-adjusted reduced prevailing amount up to a maximum of 15 percent. In determining the allowed charge for these additional physician services (which include all physician services except OBRA 89 overvalued procedures, radiology, anesthesiology, pathology, diagnostic tests, primary care, and other miscellaneous services), the prevailing charge for a locality will be reduced by 6.5 percent effective January 1, 1991.

(5) For durable medical equipment, except prosthetic and orthotic devices, beginning in 1991, national payment limits and floors will be phased-in over three years. The national upper payment limit

will be based on the weighted average of all payment amounts for each item for the given year, and the floor will be based on 85 percent of the weighted average. The covered item update is reduced 1 percentage point for 1991 and 1992.

Prosthetics and orthotics do not receive an update in 1991. Payment for prosthetics and orthotics will continue to be made on the basis of the current fee schedule methodology, and the transition to the regional fee schedule will be delayed one year until 1994.

(6) Outpatient hospital payments will be reduced three ways. Capital costs for outpatient hospital services will be reduced by 15 percent for payments attributable to portions of cost reporting periods occurring during FY 1991 and by 10 percent for payments attributable to portions of cost reporting periods occurring during FY 1992 through 1995. Reasonable costs, other than capital-related costs, for outpatient services will be reduced by 5.8 percent for payments attributable to portions of cost reporting periods occurring during FY 1991 through 1995. Sole community hospitals and primary care hospitals are exempt from these reductions. Effective January 1, 1991, payments for surgical services on the ambulatory surgical center (ASC) list of procedures and for radiology procedures performed in outpatient departments of a hospital are based on a blend of 42 percent of the lower of the hospital cost or charges less copayment and 58 percent of the ASC payment rate for surgical services and the radiology fee schedule amount for radiology procedures less its respective copayment.

(7) Effective January 1, 1991, Medicare will pay for mammography screening, subject to limits on frequency.

(8) Effective upon enactment, November 5, 1990, the period for which Medicare is secondary payer for end-stage renal disease (ESRD) beneficiaries is extended to 18 months. Additionally, the secondary payer provision for the disabled is extended through September 30, 1995.

(9) For radiology services furnished on or after January 1, 1991, the fee schedule conversion factors in local areas will be reduced up to 9.5 percent, based on comparisons with adjusted local amounts. After 1990, the technical components of magnetic resonance imaging (MRI) services and computer assisted tomography (CAT) services will be reduced 10 percent. For 1992, radiology services are allowed a special transition to the Medicare fee schedule.

(10) For clinical laboratory services, the update for 1991, 1992, and 1993 is 2 percent. Effective January 1, 1991, the national cap of the fee schedule is 88 percent of the median.

(11) Effective January 1, 1992, no payment will be made for the interpretation of an electrocardiogram made as part of an office visit or consultation with a physician.

(12) For the years 1991 through 1996, there are conversion factors established for both non-medically and medically directed certified registered nurse anesthetists. After 1996, the conversion factors will be updated by the update factor applicable for anesthesia services furnished by physicians.

(13) For new physicians in the first through the fourth year of practice, customary charge screens for 1991 are set at a level no higher than 80/85/90/95 percent of the prevailing charge. For application under the new fee schedule beginning in 1992, the fee schedule amounts for new physicians in the first through the fourth years of practice are set at levels no higher than 80/85/90/95 percent of the fee schedule amounts for established physicians. This provision is not applicable to primary care services or services furnished in rural areas designated as a health manpower shortage area. It is effective for services furnished beginning January 1, 1991.

(14) For anesthesia services furnished on or after January 1, 1991, the prevailing charge conversion factors in local areas will be reduced up to 15 percent, based on comparisons with adjusted local amounts.

(15) Effective January 1, 1991, payment for physicians as assistants-at-surgery is limited to 16 percent of the surgical global fee. Further, no payment will be made for assistants-at-surgery for procedures in which a physician assists less than 5 percent of the time.

(16) Payments for Medicare Part B services provided from November 1, 1990 and ending on December 31, 1990 are reduced 2 percent.

NATURE OF THE TRUST FUND

The Federal Supplementary Medical Insurance Trust Fund was established on July 30, 1965, as a separate account in the United States Treasury. All the financial operations of the SMI program are handled through this fund.

The major sources of receipts of the trust fund are: (1) contributions of the Federal Government that are authorized to be appropriated and transferred from the general fund of the Treasury and (2) premiums paid by eligible persons who are voluntarily enrolled in the program. The premiums paid by eligible persons in 1989 include both those specified by the Medicare Catastrophic Coverage Act of 1988 (Public Law 100-360) and those needed to finance the non-catastrophic benefits. With the enactment of the Medicare Catastrophic Coverage Repeal Act of 1989 (Public Law 101-234), there are no catastrophic premiums after 1989. Therefore the discussion in the remainder of this section will deal only with non-catastrophic coverage. Eligible persons aged 65 and over have been able to enroll in the program since its inception in July 1966. Since July 1973, disabled persons under age 65, who have met certain eligibility requirements, have also been able to enroll in the program.

The premiums paid by enrollees are based on the standard monthly premium rate, which is the same for enrollees aged 65 and over and for disabled enrollees under age 65. Premiums paid for FY 1967 through 1973 were matched by an equal amount of Government contributions. Beginning July 1973, the amount of Government contributions corresponding to premiums paid by each of the two groups of enrollees is determined by applying a ratio (known as the matching ratio), prescribed in the law for each group, to the amount of premiums received from that group of enrollees. The ratio is equal to: (1) twice the amount of the monthly actuarial rate applicable to the particular group of enrollees, minus the amount of the standard monthly premium rate, divided by (2) the amount of the standard monthly premium rate.

Standard monthly premium rates and actuarial rates are promulgated each year by the Secretary of Health and Human Services (HHS). The standard monthly premium rates in effect from July 1966 through June 1983, the rate for July 1983 through December 1983, and the rates for CY 1984 through 1991 are shown in Table 1. Actuarial rates and the corresponding matching ratios in effect from July 1973 through June 1983, the rates and ratios applicable for July 1983 through December 1983, and the rates and ratios for CY 1984 through 1991 are also shown. For a detailed discussion of the determination of the actuarial and premium rates, see Appendix B.

Another source from which receipts of the trust fund are derived is interest received on investments held by the fund. The investment procedures of the fund are described later in this section.

Section 201(i) of the Social Security Act authorizes the Managing Trustee to accept and deposit in the trust fund unconditional money gifts or bequests made for the benefit of the fund or for any activity financed through the fund.

Expenditures for benefit payments and administrative expenses under the program are paid out of the trust fund. All expenses incurred by the Department of HHS and by the Department of the Treasury in carrying out the SMI provisions of Title XVIII of the Social Security Act are charged to the trust fund. The Secretary of HHS certifies benefit payments to the Managing Trustee, who makes the payments from the trust fund in accordance therewith.

The Social Security Amendments of 1967 and 1972 authorize the Secretary of HHS to develop and conduct a broad range of experiments and demonstration projects designed to determine various methods of increasing efficiency and economy in providing health care services, while maintaining the quality of such services, under the hospital insurance (HI) and SMI programs. A sizeable portion of such costs of such experiments and demonstration projects are paid out of the HI and SMI trust funds, with the remainder funded through general revenues.

Congress has authorized expenditures from the trust funds for construction, rental and lease, or purchase contracts of office buildings and related facilities for use in connection with the SMI program. Both the capital costs of construction financed directly from the trust fund and the rental and lease, or purchase contract costs of acquiring facilities are included in trust fund expenditures. In 1972-75, construction of several large facilities was authorized under purchase contract authority, wherein initial capital costs were borne by the private sector. Under this method of facilities acquisition, trust fund expenditures for use and ultimate Government ownership of a facility are made over periods of from 10 to 30 years. Whatever the manner of acquisition, the net worth of facilities and other fixed capital assets is not carried in the statement of the assets of the trust fund presented in this report. This is because the value of fixed capital assets does not represent funds available for benefit or administrative expenditures and, therefore, is not viewed as being a consideration in assessing the actuarial status of the funds.

That portion of the trust fund which, in the judgment of the Managing Trustee, is not required to meet current expenditures for benefits and administration is invested in interest-bearing obligations of the U.S. Government (including special public-debt obligations described below), in obligations guaranteed as to both principal and interest by the United States, or in certain federally sponsored agency obligations that are designated in the laws authorizing their issuance as lawful investments for fiduciary and trust funds under the control and authority of the United States or any officer of the United States. Obligations of these types may be acquired on original issue at the issue price or by purchase of outstanding obligations at their market price.

The Social Security Act authorizes the issuance of special public-debt obligations for purchase exclusively by the trust fund. The law requires that such special public-debt obligations shall bear interest at a rate based on the average market yield (computed on the basis of market quotations as of the end of the calendar month next preceding the date of such issue) on all marketable interest-bearing obligations of the United States forming a part of the public debt which are not due or callable until after the expiration of 4 years from the end of such calendar month.

Table 1.-- STANDARD MONTHLY PREMIUM RATES, ACTUARIAL RATES, AND MATCHING RATIOS

	Standard monthly premium rate	Monthly actuarial rate		Matching ratio	
		Enrollees aged 65 and over	Disabled enrollees under age 65	Enrollees aged 65 and over	Disabled enrollees under age 65
July 1966 - March 1968	$ 3.00	---	---	---	---
April 1968 - June 1970	4.00	---	---	---	---
12-month period ending June 30 of --					
1971	5.30	---	---	---	---
1972	5.60	---	---	---	---
1973	5.80	---	---	---	---
1974 1/	6.30	$ 6.30	$14.50	1.0000	3.6032
1975	6.70	6.70	18.00	1.0000	4.3731
1976	6.70	7.50	18.50	1.2388	4.5224
1977	7.20	10.70	19.00	1.9722	4.2778
1978	7.70	12.30	25.00	2.1948	5.4935
1979	8.20	13.40	25.00	2.2683	5.0976
1980	8.70	13.40	25.00	2.0805	4.7471
1981	9.60	16.30	25.50	2.3958	4.3125
1982	11.00	22.60	36.60	3.1091	5.6565
1983	12.20	24.60	42.10	3.0328	5.9016
July 1983 - December 1983	12.20	27.00	46.10	3.4262	6.5574
Calendar year					
1984	14.60	29.20	54.30	3.0000	6.4384
1985	15.50	31.00	52.70	3.0000	5.8000
1986	15.50	31.00	40.80	3.0000	4.2645
1987	17.90	35.80	53.00	3.0000	4.9218
1988	24.80	49.60	46.60	3.0000	2.9194
1989	31.90 2/	55.80	34.30	3.0000 3/	1.4588 3/
1990	28.60	57.20	44.10	3.0000	2.0839
1991	29.90	62.60	56.00	3.1073	2.7458

1/ In accordance with limitations on the costs of health care imposed under Phase III of the Economic Stabilization program, the standard premium rate for July and August 1973 was set at $5.80 and $6.10, respectively. Effective September 1973, the rate increased to $6.30.

2/ This is the premium paid by most groups. This rate includes the $4.00 catastrophic coverage monthly premium which was paid by most enrollees.

3/ The matching ratios for CY 1989 apply to the non-catastrophic portion of the standard monthly premium rate.

SUMMARY OF THE OPERATIONS OF THE TRUST FUND, FISCAL YEAR 1990

A statement of the income and disbursements of the Federal Supplementary Medical Insurance Trust Fund in FY 1990 and of the assets of the fund at the beginning and end of the fiscal year is presented in Table 2.

The total assets of the trust fund amounted to $11,412 million on September 30, 1989. During FY 1990, total receipts amounted to $46,138 million, and total disbursements were $43,022 million. Total assets thus increased $3,115 million during the year to a total of $14,527 million on September 30, 1990.

Of the total receipts, $10,138 million represented premium payments by (or on behalf of) enrollees aged 65 and over, $995 million represented premium payments by (or on behalf of) disabled enrollees under age 65, and $361 million represented catastrophic coverage monthly premium payments. Total premium payments amounted to $11,494 million, a decrease of 0.5 percent over the amount of $11,548 million for the preceding year. This decrease in premiums from enrollees resulted primarily from the decrease from $31.90 to $28.60 per month in the standard premium rate that became effective on January 1, 1990 as a result of the repeal of catastrophic coverage. The impact of this decrease was somewhat offset by the growth in the number of persons enrolled in the SMI program.

Contributions received from the general fund of the treasury amounted to $33,210 million, which accounted for 72.0 percent of total receipts. This amount consisted of $31,107 million representing contributions relating to premiums paid by enrollees aged 65 and over, and $2,103 million representing contributions relating to the premiums paid by disabled enrollees under age 65. The remaining $1,431 million of receipts consisted almost entirely of interest on the investments of the trust fund.

Of the $43,022 million in total disbursements, $41,498 million represented: (1) benefits paid directly from the trust fund for health services covered under Title XVIII of the Social Security Act and (2) costs of experiments and demonstration projects in providing health care services.

The remaining $1,524 million of disbursements was for administrative expenses. Administrative expenses are allocated and charged directly to each of the four trust funds--old age and survivors insurance, disability insurance, HI, and SMI--on the basis of provisional estimates. Similarly, the expenses of administering other programs of the Health Care Financing Administration (HCFA) are also allocated and charged directly to the general fund of the Treasury on a provisional basis. Periodically, as actual experience develops and is analyzed, the allocations of administrative expenses and costs of construction for prior periods are adjusted by interfund transfers. This adjustment includes transfers between the HI and SMI trust funds and the program management general fund account, with appropriate interest allowances.

In Table 3, the experience with respect to actual amounts of enrollee premiums, Government contributions, and benefit payments in FY 1990 is

compared with the estimates for FY 1990 which appeared in the 1989 and 1990 annual reports.

Table 4 shows a comparison of the total assets of the fund and their distribution at the end of FY 1989 and at the end of FY 1990. The assets of the trust fund at the end of FY 1989 totaled $11,412 million, consisting of $11,398 million in the form of obligations of the U.S. Government, and an undisbursed balance of $15 million. The assets of the trust fund at the end of FY 1990 totaled $14,527 million, consisting of $14,286 million in the form of obligations of the U.S. Government and an undisbursed balance of $241 million. A comparison of assets of the trust fund with liabilities for incurred but unpaid benefits (and related administrative expenses) is shown in a later section.

The net increase in the par value of the investments held by the fund during FY 1990 amounted to $2,888 million. New securities at a total par value of $51,489 million were acquired during the fiscal year through the investment of receipts and reinvestment of funds made available from the redemption of securities. The par value of securities redeemed during the year was $48,262 million. Included in these amounts is $47,003 million in certificates of indebtedness that were acquired, and $46,549 million in certificates of indebtedness that were redeemed, within the fiscal year.

The effective annual rate of interest earned by the assets of the SMI trust fund for the 12 months ending on June 30, 1990 was 10.0 percent. This period is used because interest on special issues is paid semiannually on June 30 and December 31. The interest rate on special issues purchased by the trust fund in June 1990 was 8 3/4 percent, payable semiannually.

Table I.--STATEMENT OF OPERATIONS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND DURING FISCAL YEAR 1990
(In thousands)

Total assets of the trust fund, beginning of period		$ 11,412,088
Receipts:		
Premiums from enrollees:		
Enrollees aged 65 and over	$ 10,137,984	
Disabled enrollees under age 65	994,523	
Catastrophic coverage monthly premiums	361,461	
Total premiums		11,493,968
Transfers from general fund of the Treasury:		
Government contributions:		
Supplementary premiums of enrollees aged 65 and over	31,106,988	
Supplementary premiums of disabled enrollees under age 65	2,103,023	
Total Government contributions		33,210,011
Other		2,930
Interest:		
Interest on investments	1,430,553	
Interest on amounts of interfund transfers *	80	
Total interest		1,430,633
Total receipts		46,137,542
Disbursements:		
Benefit payments		41,497,779
Administrative expenses:		
Treasury administrative expenses	(433)	
Salaries and expenses - SSA	243,110	
Salaries and expenses - HCFA	1,258,317	
Salaries and expenses Office of Secretary	15,039	
Construction	1,538	
Public Health Service	2,415	
Pay Assessment Commission	580	
Office of Personnel Management expenses	100	
Physicians Payment Review	3,806	
Total administrative expenses		1,524,472
Total disbursements		43,022,251
Net addition to the trust fund		3,115,291
Total assets of the trust fund, end of period		14,527,379

* A positive figure represents a transfer of interest to the SMI trust fund from the other trust funds.
A negative figure represents a transfer of interest from the SMI trust fund to the other trust funds.

NOTE: Totals do not necessarily equal the sum of rounded components.

Table 3.-- COMPARISON OF ACTUAL AND ESTIMATED OPERATIONS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND, FISCAL YEAR 1990
(Dollar amounts in millions)

Item	Actual amount	Comparison of actual experience with estimates for FY 1990 published in -- 1990 report: Estimated amount	1990 report: Actual as percentage of estimate	1989 report: Estimated amount	1989 report: Actual as percentage of estimate
Premiums from enrollees 1/	$11,494	$11,380	101	$11,680 2/	98
Government contributions	33,210	32,879	101	33,415	99
Benefit payments	41,498	42,502	98	43,421 3/	96

1/ The FY 1990 premium contributions from enrollees included catastrophic coverage monthly premiums, which was mandated by the Medicare Catastrophic Coverage Act of 1988 (Public Law 100-360). This provision was repealed effective January 1, 1990.

2/ The 1989 estimate for FY 1990 enrollee premium contributions excludes estimated amounts for the supplemental catastrophic coverage premiums which were repealed retroactive to January 1, 1989 by the Medicare Catastrophic Coverage Repeal Act of 1989 (Public Law 101-234).

3/ The 1989 estimate for FY 1990 benefit payments excludes estimated amounts for the payments of benefits included in the Medicare Catastrophic Coverage Act of 1988 (Public Law 100-360). Part B benefits which were to be effective January 1, 1990 were repealed by the Medicare Catastrophic Coverage Repeal Act of 1989 (Public Law 101-234).

Table 4.--ASSETS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND AT THE END OF FISCAL YEARS 1989 AND 1990 *

	September 30, 1989	September 30, 1990
Investments in public-debt obligations sold only to this fund (special issues):		
Certificates of indebtedness:	$ 345,777,000.00	$ 460,590,000.00
Bonds:		
8 3/8-percent, 2001	444,270,000.00	444,270,000.00
8 3/4-percent, 1990-2005	4,743,765,000.00	7,645,809,000.00
9 1/4-percent, 1992-93	1,126,519,000.00	998,054,000.00
9 3/4-percent, 1995	115,003,000.00	115,003,000.00
10 3/8-percent, 1994-2000	1,661,292,000.00	1,661,292,000.00
10 3/4-percent, 1994-98	809,231,000.00	809,231,000.00
13 1/4-percent, 1994-97	1,033,983,000.00	1,033,983,000.00
13 3/4-percent, 1994-99	1,117,677,000.00	1,117,677,000.00
Total investments in public-debt obligations	11,397,517,000.00	14,285,909,000.00
Undisbursed balance	14,571,382.00	241,469,924.28
Total assets	11,412,088,382.00	14,527,378,924.28

* The assets are carried at par value, which is the same as book value.

EXPECTED OPERATIONS AND STATUS OF THE TRUST FUND

Financing for the SMI program is established annually on the basis of standard monthly premium rates (paid by or on behalf of the enrollees) and actuarial rates on which general revenue contributions are based. Beginning January 1, 1984, the annual basis has been the calendar year. For 1989, only, the financing was established also on the basis of the catastrophic coverage monthly premium rate. With the enactment of the Medicare Catastrophic Coverage Repeal Act of 1989 (Public Law 101-234), the financing for 1990 and beyond will no longer be established on the basis of catastrophic coverage premium rates.

Although standard monthly premium rates have been set for periods through December 31, 1995 and actuarial rates have been set for periods through December 31, 1991, projections are presented through December 31, 2000. It has been assumed in this report that financing after those times will be established in accordance with the provisions described in the "Nature of the Trust Fund" section.

The projections shown in Tables 5, 6 and 7 are based on the economic assumptions labeled "alternative II." The economic and demographic assumptions underlying the alternative II projections are described in detail in the 1991 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds. Appendix A presents an explanation of the effects of the alternative II assumptions on the projections in this report.

The January 1, 1991 average update of the allowable fee for physician services is assumed to be -4.8 percent. Alternative II assumes the January 1, 1992 average update to be 2.1 percent. The costs per enrollee for institutional and other services under the SMI program are projected to increase an average of 14.6 percent for CY 1991 and 14.3 percent for CY 1992. These increases represent price increases and increases due to other factors.

Table 5 shows the projected operations of the trust fund for alternative II on a fiscal-year basis through FY 1993. Table 6 shows the corresponding development on a calendar-year basis. The level of the trust fund increased in FY 1990 and CY 1990 mainly due to the passage of Public Law 101-239 after the financing for CY 1990 had been established. Public Law 101-239 reduced expenditures beginning in CY 1990. For CY 1991, the actuarial rates were promulgated with specific margins to reduce assets. However, the rates were set before the passage of Public Law 101-508, which reduced expenditures beginning, for the most part, in CY 1991. As a result, based on these actuarial rates and the above economic assumptions, the fund is projected to increase to $17.1 billion by the end of CY 1991. The alternative II projections assume that the financing for CY 1992 will be set to reduce assets, and, as a result, the fund decreases to $15.7 billion by the end of CY 1992.

Table 7 shows the calendar-year average increase in aggregate and per capita benefit payments under alternative II through CY 1993. To reflect the size of the program relative to the economy as a whole, Table 7 also shows SMI

benefit expenditures as a percent of Gross National Product (GNP). During CY 1990, the program grew 10.9 percent on an aggregate basis, grew 9.2 percent on a per capita basis, and increased from .74 to .78 percent of GNP.

Since future health care usage and cost experience may vary considerably from the intermediate set of assumptions (alternative II) on which the cost estimates were based, projections have also been prepared on the basis of two additional alternative sets of assumptions: alternative I and alternative III. The estimated operations of the SMI trust fund during CY 1990-2000 are summarized in Table 8 for all three alternatives. The assumptions underlying alternative II are presented in substantial detail in Appendix A. The assumptions used in preparing projections under alternative I and III are also summarized in Appendix A.

The three alternative sets of assumptions were selected in order to indicate the general range in which the cost of the program reasonably might be expected to fall. The alternative I assumptions are somewhat more optimistic than the alternative II assumptions, resulting in a lower average expenditure growth over the projection period. The alternative III assumptions are somewhat more pessimistic than alternative II assumptions, resulting in a higher average expenditure growth over the projection period. Alternatives I and III provide for a fairly wide range of possible experience. Actual experience is expected to fall within the range, but no guarantee can be made that this will be the case, particularly in light of the wide variations in experience that have occurred since the beginning of the program.

SMI expenditures are projected to grow faster than the GNP under all three alternatives, with the most rapid growth occurring under alternative III assumptions and the least rapid under alternative I assumptions. Table 8 indicates that by CY 2000 total disbursements for alternative I and for alternative III will be 18 percent lower and 23 percent higher, respectively, than for alternative II. Similarly, for CY 2000 total income for alternative I and for alternative III will be 18 percent lower and 23 percent higher, respectively, than for alternative II. However, the trust fund balances for alternative I and III do not display this divergence. The CY 2000 trust fund balance under alternative I is 7 percent lower than the trust fund balance for alternative II, and the trust fund balance for alternative III is 7 percent higher than under alternative II. The reason the trust fund balances show much smaller variations under the three alternatives is that the financing has only been fully established through CY 1991. It is assumed that financing for years beyond 1991 will be established to adequately finance the expenditures, irrespective of the underlying economic assumptions.

Table 5.--ESTIMATED PROGRESS OF SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND (CASH BASIS)
FISCAL YEARS 1991-1993 AND ACTUAL DATA FOR 1967-1990
(In millions)

Fiscal year 1/	Income				Disbursements			Balance in fund at end of year 4/
	Premiums from enrollees	Government contributions 2/	Interest and other income 3/	Total income	Benefit payments	Administrative expenses	Total disbursements	
Historical:								
1967	$ 647	$ 623	$ 15	$ 1,285	$ 664	$ 135 5/	$ 799	$ 486
1968	698	634	21	1,353	1,390	142	1,532	307
1969	903	984	24	1,911	1,645	195	1,840	378
1970	936	928	12	1,876	1,979	217	2,196	57
1971	1,253	1,245	18	2,516	2,035	248	2,283	290
1972	1,340	1,365	29	2,736	2,255	289	2,544	481
1973	1,427	1,430	45	2,902	2,391	246	2,637	746
1974	1,704	2,029	76	3,809	2,874	409	3,283	1,272
1975	1,887	2,330	105	4,322	3,765	405	4,170	1,424
1976	1,951	2,939	104	4,994	4,672	528	5,200	1,219
T.Q.	539	878	4	1,421	1,269	132	1,401	1,239
1977	2,193	5,053	137	7,383	5,867	475	6,342	2,279
1978	2,431	6,386	228	9,045	6,852	504	7,356	3,968
1979	2,635	6,841	363	9,839	8,259	555	8,814	4,994
1980	2,928	6,932	415	10,275	10,144	593	10,737	6,532
1981	3,320	8,767	372	12,439	12,365	883	13,228	3,743
1982	3,831	13,323	473	17,627	14,806	754	15,560	5,810
1983	4,227	14,238	682	19,147	17,487	824	18,311	6,646
1984	4,907	16,811	807	22,525	19,473	899	20,372	8,799
1985	5,524	17,898	1,155	24,577	21,808	922	22,730	10,646
1986	5,699	18,076	1,228	25,003	25,169	1,049	26,218	9,432
1987	6,480	20,299	1,018	27,797	29,937	900	30,837	6,392
1988	8,756	25,418	828	35,002	33,682	1,265	34,947	6,447
1989	11,548 6/	30,712	1,022 6/	43,282 6/	36,867	1,450 6/	38,317 6/	11,412 6/
1990	11,494 6/	33,210	1,434 6/	46,138 6/	41,498	1,524 6/	43,022 6/	14,527 6/
Projected:								
1991	11,671	34,730	1,432	47,833	45,787	1,559	47,326	15,034
1992	12,559	40,403	1,358	54,320	51,922	1,635	53,557	15,797
1993	14,420	43,483	1,302	59,205	58,539	1,722	60,261	14,741

1/ For 1967 through 1976, fiscal years cover the interval from July 1 through June 30; the three-month interval from July 1, 1976, through September 30, 1976, is labeled "T.Q.", the transition quarter; FY 1977-93 cover the interval from October 1 through September 30.
2/ The payments shown as being from the general fund of the Treasury include certain interest-adjustment items.
3/ Other income includes recoveries of amounts reimbursed from the trust fund which are not obligations of the trust fund and other miscellaneous income.
4/ The financial status of the program depends on both the total net assets and the liabilities of the program (See Table 10).
5/ Administrative expenses shown include those paid in FY 1966 and 1967.
6/ Includes the impact of the Medicare Catastrophic Coverage Act of 1988 (Public Law 100-360).

Table 6.--ESTIMATED PROGRESS OF SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND (CASH BASIS)
CALENDAR YEARS 1991-1993 AND ACTUAL DATA FOR 1966-1990
(In millions)

Calendar year	Income: Premiums from enrollees	Income: Government contributions 1/	Income: Interest and other income 2/	Income: Total income	Disbursements: Benefit payments	Disbursements: Administrative expenses	Disbursements: Total disbursements	Balance in fund at end of year 3/
Historical:								
1966	$ 322	$ 0	$ 2	$ 324	$ 128	$ 75	$ 203	$ 122
1967	640	933	24	1,597	1,197	110	1,307	412
1968	832	858	21	1,711	1,518	184	1,702	421
1969	914	907	18	1,839	1,865	196	2,061	199
1970	1,096	1,093	12	2,201	1,975	237	2,212	188
1971	1,302	1,313	24	2,639	2,117	260	2,377	450
1972	1,382	1,389	37	2,808	2,325	289	2,614	643
1973	1,550	1,705	57	3,312	2,526	318	2,844	1,111
1974	1,804	2,225	95	4,124	3,318	410	3,728	1,506
1975	1,918	2,648	107	4,673	4,273	462	4,735	1,444
1976	2,060	3,810	107	5,977	5,080	542	5,622	1,799
1977	2,247	5,386	172	7,805	6,038	467	6,505	3,099
1978	3,470	6,287	299	9,056	7,252	503	7,755	4,600
1979	2,719	6,645	404	9,768	8,708	557	9,265	4,902
1980	3,011	7,455	408	10,874	10,635	610	11,245	4,530
1981	3,722 4/	11,291 4/	361	15,374	13,113	915	14,028	5,877
1982	3,697 4/	12,284 4/	599	16,580	15,455	772	16,227	6,230
1983	4,236	14,861	727	19,824	18,106	878	18,984	7,070
1984	5,167	17,054	959	23,180	19,661	891	20,552	9,698
1985	5,413	18,250	1,243	25,106	22,947	933	23,880	10,924
1986	5,722	17,802	1,141	24,665	26,239	1,060	27,299	8,291
1987	7,409 5/	23,560 5/	875	31,844	30,820	920	31,740	8,394
1988	8,761 5/	26,203 5/	861	35,825	33,970	1,260	35,230	8,990
1989	12,263 6/	30,852	1,234 6/	44,349 6/	38,294	1,489 6/	39,783 6/	13,556 6/
1990	11,320	33,035	1,558	45,913	42,468	1,519	43,987	15,482
Projected:								
1991	11,844	37,301	1,322	50,467	47,259	1,573	48,832	17,117
1992	12,797	39,601	1,367	53,765	53,512	1,656	55,168	15,714
1993	14,960	44,776	1,236	60,972	60,413	1,744	62,157	14,529

1/ The payments shown as being from the general fund of the Treasury include certain interest-adjustment items.

2/ Other income includes recoveries of amounts reimbursed from the trust fund which are not obligations of the trust fund and other miscellaneous income.

3/ The financial status of the program depends on both the total net assets and the liabilities of the program (See Table 10).

4/ Section 708 of Title VII of the Social Security Act modified the provisions for the delivery of Social Security benefit checks when the regularly designated delivery day falls on a Saturday, Sunday, or legal public holiday. Delivery of benefit checks normally due January, 1982 occurred on December 31, 1981. Consequently, the SMI premiums withheld from the checks ($264 million) and the general revenue matching contributions ($881 million) were added to the SMI trust fund on December 31, 1981. These amounts are excluded from the premium income and general revenue income for CY 1982.

5/ Delivery of benefit checks normally due January, 1988 occurred on December 31, 1987. Consequently, the SMI premiums withheld from the checks ($692 million) and the general revenue matching contributions ($2,178 million) were added to the SMI trust fund on December 31, 1987. These amounts are excluded from the premium income and general revenue income for CY 1988 (Refer to footnote 4).

6/ Includes the impact of the Medicare Catastrophic Coverage Act of 1988 (Public Law 100-360).

Table 7.--GROWTH IN TOTAL CASH BENEFITS UNDER THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM THROUGH DECEMBER 31, 1993

Calendar year	Aggregate benefits (millions)	Percent change	Per capita benefits	Percent change	SMI benefits as a percent of GNP
Historical:					
1967	$ 1,197		$ 66.97		0.15
1968	1,518	26.8	82.27	22.8	0.17
1969	1,865	22.9	97.86	19.0	0.19
1970	1,975	5.9	101.30	3.5	0.19
1971	2,117	7.2	106.68	5.3	0.19
1972	2,325	9.8	114.91	7.7	0.19
1973	2,526	8.6	122.02	6.2	0.19
1974	3,318	31.4	144.47	18.4	0.23
1975	4,273	28.8	179.96	24.6	0.27
1976	5,080	18.9	207.39	15.2	0.28
1977	6,038	18.9	239.27	15.4	0.30
1978	7,252	20.1	279.58	16.8	0.32
1979	8,708	20.1	326.86	16.9	0.35
1980	10,635	22.1	389.87	19.3	0.39
1981	13,113	23.3	471.15	20.8	0.43
1982	15,455	17.9	545.55	15.8	0.49
1983	18,106	17.2	627.79	15.1	0.53
1984	19,661	8.6	670.77	6.8	0.52
1985	22,947	16.7	768.25	14.5	0.57
1986	26,239	14.3	861.37	12.1	0.62
1987	30,820	17.5	992.69	15.2	0.68
1988	33,970	10.2	1,078.41	8.6	0.70
1989	38,294	12.7	1,197.55	11.0	0.74
1990	42,468	10.9	1,307.27	9.2	0.78
Projected:					
1991	47,259	11.3	1,431.61	9.5	0.84
1992	53,512	13.2	1,595.71	11.5	0.89
1993	60,413	12.9	1,773.67	11.2	0.94

Table 8.--ESTIMATED PROGRESS OF SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND (CASH BASIS)
CALENDAR YEARS 1990-2000
(In billions)

Calendar year	Premiums from enrollees	Other income *	Total income	Total disburse-ments	Balance in fund at end year
Alternative I:					
1990	$11.3	$ 34.6	$ 45.9	$ 44.0	$15.5
1991	11.8	38.6	50.5	48.8	17.1
1992	12.8	39.5	52.3	53.8	15.6
1993	15.0	43.2	58.2	59.5	14.3
1994	17.0	47.9	65.0	66.2	13.1
1995	19.4	55.7	75.1	73.8	14.4
1996	20.2	63.4	83.6	82.2	15.8
1997	21.0	71.7	92.7	91.1	17.4
1998	21.9	80.5	102.4	100.8	19.0
1999	22.7	90.4	113.2	111.4	20.8
2000	23.6	101.6	125.2	123.3	22.8
Alternative II:					
1990	11.3	34.6	45.9	44.0	15.5
1991	11.8	38.6	50.5	48.8	17.1
1992	12.8	41.0	53.8	55.2	15.7
1993	15.0	46.0	61.0	62.2	14.5
1994	17.0	52.3	69.4	70.4	13.5
1995	19.4	62.3	81.7	80.2	14.9
1996	20.4	72.6	93.0	91.4	16.5
1997	21.4	83.9	105.3	103.6	18.2
1998	22.5	96.6	119.0	117.2	20.0
1999	23.6	111.0	134.6	132.5	22.2
2000	24.8	127.5	152.3	149.9	24.6
Alternative III:					
1990	11.3	34.6	45.9	44.0	15.5
1991	11.8	38.6	50.5	48.8	17.1
1992	12.8	41.9	54.7	56.0	15.8
1993	15.0	48.7	63.7	64.9	14.5
1994	17.0	56.5	73.6	74.6	13.5
1995	19.4	68.1	87.5	86.0	15.0
1996	20.8	82.0	102.8	101.1	16.7
1997	22.0	98.2	120.2	118.3	18.6
1998	23.4	116.1	139.5	137.2	20.9
1999	24.7	136.8	161.5	159.0	23.4
2000	26.2	161.2	187.4	184.5	26.3

* Other income contains government contributions and interest.

NOTE: Totals do not necessarily equal the sum of rounded components.

ACTUARIAL STATUS OF THE TRUST FUND

1. ACTUARIAL SOUNDNESS OF THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM

The concept of actuarial soundness, as it applies to the SMI program, is closely related to the concept as it applies to private group insurance. The SMI program essentially is yearly renewable term insurance financed from premium income paid by the enrollees and from income contributed from general revenue. Consequently, the income to the program during a 12-month period for which financing is being established should be sufficient to maintain assets at a level to pay for services (including associated administrative costs) expected to be rendered during that period, even though payment for some of these services will not be made until after the close of the period. The portion of income required to cover those benefits not paid until after the close of the year should be added to the trust fund until needed. Thus, the assets in the trust fund at any time should be no less than the costs of the benefits and the administrative expenses incurred but not yet paid.

The law requires the Secretary of HHS to establish income on the basis of incurred costs (including associated administrative costs) for the 12-month period for which financing is being established. Financing on an incurred basis means that income should be sufficient to cover the cost of services rendered during the period. However, since the income per enrollee (premium rate plus Government contribution) is established prospectively, it is subject to projection error. Additionally, legislation enacted after the financing has been established but effective for the period for which financing has been set, may affect program costs. As a result, the income to the program may not be equal to incurred costs; therefore, trust fund assets should be maintained at a level which is adequate to cover the impact of a moderate degree of variation between actual and projected costs, as well as the value of incurred but unpaid expenses.

In testing the actuarial soundness of the SMI program, it is not appropriate to look beyond the period for which the enrollee premium rates and level of general revenue financing have been established. The primary tests of actuarial soundness, then, are that: (1) assets and income for years for which financing has been established be sufficient to meet the projected benefits and associated administrative expenses incurred for that period and (2) assets be sufficient to cover projected liabilities that will have been incurred by the end of that time but will not have been paid yet. Even if these tests of actuarial soundness are not met, the program can continue to operate if the trust fund remains at a level adequate to permit the payment of claims as presented. However, to protect against the possibility that cost increases under the program will be higher than assumed, assets should be sufficient to include contingency levels to cover the impact of a moderate degree of variation between actual and projected costs.

Contingency levels to accommodate cost increases that may be higher than expected are measured by the excess of assets over liabilities. An appropriate target level for this excess depends on numerous factors. The most important of these factors are: (1) the difference from prior years in the actual

performance of the program and the estimates made at the time financing was established and (2) the expected relationship between incurred and cash expenditures. Ongoing analysis is made of the former as trends in the differences vary over time.

2. INCURRED EXPERIENCE OF THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM

The tests of actuarial soundness of the SMI program noted above rely on the incurred experience of the program. Cash disbursements for benefits and administrative expenses by themselves are misleading, due to the relatively large liabilities outstanding at any time for benefits and processing costs. Outstanding liabilities result from the lag between the time that services are performed and the time that payments for them are made.

The experience of the program is substantially more difficult to determine on an incurred basis than on a cash basis. Payment for some services is reported only on a cash basis, and the incurred experience must be inferred from the cash payment information. For recent time periods, the tabulations of bills are incomplete due to normal processing delays. Finally, since bills are tabulated only for a sample of beneficiaries, the data is subject to biases and random fluctuations inherent in the sampling process.

Table 9 shows the estimated transactions of the trust fund on an incurred basis. For the reasons stated above, the incurred experience must be viewed as an estimate even for historical years. Various checks, such as cash outlay data, assure that the estimates are reasonably close, however.

3. ACCUMULATED EXCESS OF ASSETS OVER LIABILITIES

The liability outstanding at any time for the cost of services performed for which no payment has been made is referred to as "benefits incurred but unpaid." Estimates of the amount of benefits incurred but unpaid as of the end of each financing period, and of the administrative expenses related to processing these benefits, appear in Table 10. For some years of the program, assets have not been as large as outstanding liabilities. Nonetheless, the fund has remained positive, allowing claims to be paid.

Program financing has been established through December 31, 1991. The financing for CY 1991 was designed with specific margins to reduce the excess of assets over liabilities as a percent of incurred expenditures for the following year. However, Public Law 101-508 was enacted on November 5, 1990 after the financing had been established for CY 1991. As a net result of these measures, the excess of assets over liabilities is expected to increase from $9,278 million at the end of December 1990 to $10,092 million at the end of December 1991 for alternative II. This excess as a percent of incurred expenditures for the following year, however, is expected to decrease from 18.7 percent as of December 31, 1990 to 18.0 percent as of December 31, 1991.

4. SENSITIVITY TESTING

Some of the assumptions underlying the projections presented in this report are highly uncertain, and variations in these assumptions would have a substantial impact on projected expenditures. Since the financing rates are set prospectively, the actuarial soundness depends on the variations in these assumptions. In order to test the actuarial soundness of the program under varying assumptions, a low cost projection and a high cost projection were prepared by varying these key assumptions through the period for which the financing has been set. The low and high cost alternative sets of assumptions are intended to reflect growth rates for the various components of program costs which are more favorable and adverse, respectively, than those of the intermediate projections (alternative II) and which are not unreasonable themselves in light of the nature and historical experience of the program. As such, they provide a range of financial outcomes within which the actual experience of the program might reasonably be expected to fall. The values for the low and high assumptions were determined from a study on the average historical variation in the respective increase factors.

This sensitivity analysis differs from the alternative I and III analysis discussed in the "Expected Operations and Status of the Trust Fund" section. This analysis examines the variation in the projection factors through the period for which the financing has been established (1991 for this report). The alternative I and III analysis begins the variation in program growth with the first year after the year for which financing has been established (1992 for this report).

Table 11 indicates that, under the low cost assumptions, trust fund assets would exceed liabilities by the end of December 1991 (the period through which financing has been established), reaching a level of 28.3 percent of the following year's incurred expenditures. If these low growth rates were actually to materialize, then subsequent financing rates would be adjusted downward in order to lower the excess of assets over liabilities to an appropriate level to maintain the actuarial soundness of the trust fund. Under the high cost assumptions, trust fund assets would still exceed liabilities by the end of December 1991, reaching a level of 9.1 percent of the following year's incurred expenditures. Therefore, even if these high growth rates were to occur, assets would still be sufficient to cover outstanding liabilities.

Table 9.--ESTIMATED INCOME AND DISBURSEMENTS INCURRED UNDER SUPPLEMENTARY MEDICAL INSURANCE PROGRAM FOR FINANCING PERIODS THROUGH DECEMBER 31, 1991
(In millions)

Financing period	Premiums from enrollees	Government contributions	Interest and other income	Benefit payments	Administrative expenses	Net operations in year
Historical:						
12-month period ending June 30,						
1967	$ 647	$ 647	$ 15	$ 1,109	$ 123 1/	$ 77
1968	698	698	21	1,443	155	-181
1969	903	903	24	1,765	198	-133
1970	936	936	12	1,929	213	-258
1971	1,253	1,253	18	2,090	259	175
1972	1,340	1,340	29	2,289	259	161
1973	1,427	1,426	45	2,500	302	96
1974	1,704	2,031	76	3,150	353	308
1975	1,887	2,396	105	3,931	438	19
1976	1,951	2,972	109	4,827	485	-280
1977	2,156	4,697	157	5,870	515	625
1978	2,358	5,991	254	6,964	511	1,128
1979	2,601	6,570	365	8,185	649	702
1980	2,823	6,627	421	9,961	645	-735
1981	3,178	8,219	371	12,059	692	-983
1982	3,737	12,488	495	14,042	728	1,950
1983	4,202	13,951	686	17,090	708	1,041
Transition semester 2/	2,120	7,836	374	9,736	483	111
Calendar year						
1984	5,167	17,052	962	20,337	869	1,975
1985	5,613	18,243	1,248	22,918	986	1,200
1986	5,722	17,802	1,141	26,766	1,000	-3,101
1987	6,717	21,377	880	30,903	1,036	-2,965
1988	9,453	28,342	903	34,671	1,307	2,720
1989	12,263 3/	30,826	1,257 3/	38,638	1,538 3/	4,170 3/
1990	11,320	33,035	1,558	42,946	1,518	1,449
Projected:						
Calendar year						
1991	11,844	37,274	1,349	48,080	1,573	814

1/ Includes administrative expenses incurred prior to the beginning of the program.
2/ The transition semester is the 6-month period July 1, 1983 to December 31, 1983.
3/ Includes the impact of the Medicare Catastrophic Coverage Act of 1988 (Public Law 100-360).

Table 10.--SUMMARY OF ESTIMATED ASSETS AND LIABILITIES OF THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM AS OF THE END OF THE FINANCING PERIOD, FOR PERIODS THROUGH DECEMBER 31, 1991
(Dollar amounts in millions)

	Balance in trust fund	Government contributions due but unpaid	Total assets	Benefits incurred but unpaid	Administrative costs incurred but unpaid	Total liabilities	Excess of assets over liabilities	Ratio 1/
Historical:								
As of June 30,								
1967	$ 486	$ 24	$ 510	$ 445	$ -12	$ 433	$ 77	0.05
1968	307	88	395	498	1	499	-104	-0.05
1969	378	7	385	618	4	622	-237	-0.11
1970	57	15	72	568	0	568	-496	-0.21
1971	290	22	312	623	11	634	-322	-0.13
1972	481	-3	478	657	-19	638	-160	-0.06
1973	746	-7	739	766	37	803	-64	-0.02
1974	1,272	-5	1,267	1,042	-19	1,023	244	0.06
1975	1,424	67	1,491	1,208	14	1,222	269	0.05
1976	1,219	106	1,325	1,363	-29	1,334	-9	0.00
1977	2,170	91	2,261	1,644	3	1,647	614	0.08
1978	3,786	48	3,834	2,051	40	2,091	1,743	0.20
1979	4,880	2	4,882	2,316	123	2,439	2,443	0.23
1980	4,657	0	4,657	2,761	188	2,949	1,708	0.13
1981	3,801	0	3,801	3,062	13	3,075	726	0.05
1982	5,534	1	5,535	2,868	-9	2,859	2,676	0.15
1983	6,780	2	6,782	3,113	-48	3,065	3,717	0.18
As of December 31,								
1983	7,070	1	7,071	3,311	-69	3,242	3,829	0.18
1984	9,698	2	9,700	3,987	-91	3,896	5,804	0.24
1985	10,924	0	10,924	3,958	-38	3,920	7,004	0.25
1986	8,291	0	8,291	4,485	-98	4,387	3,904	0.12
1987	8,394 2/	0	8,394 2/	4,568	17	7,455 2/	939	0.03
1988	8,990	3	8,993	5,270	64	5,334	3,659	0.09
1989 3/	13,556	0	13,556	5,614	113	5,727	7,829	0.18
1990	15,482	0	15,482	6,092	112	6,204	9,278	0.19
Projected:								
1991	17,117	0	17,117	6,913	112	7,025	10,092	0.18

1/ Ratio of the excess of assets over liabilities to the following year's total incurred expenditures.

2/ Section 708 of Title VII of the Social Security Act modified the provisions for the delivery of Social Security benefit checks when the regularly designated day falls on a Saturday, Sunday, or legal public holiday. Delivery of benefit checks normally due January, 1988 occurred on December 31, 1987. Consequently, the SMI premiums withheld from the checks ($692 million) and the general revenue matching contributions ($2,178 million) were added to the SMI trust fund on December 31, 1987 and were included in the liabilities.

3/ Beginning in 1989, the transactions of the Medicare Catastrophic Coverage Account are included in the assets and liabilities of the trust fund.

Table 11.--ACTUARIAL STATUS OF THE SMI TRUST FUND UNDER THREE SETS OF ASSUMPTIONS FOR FINANCING PERIODS THROUGH DECEMBER 31, 1991

	Alternative II projection			Low cost projection			High cost projection		
	12-Month period ending June 30,			12-Month period ending June 30,			12-Month period ending June 30,		
	1990	1991	1992	1990	1991	1992	1990	1991	1992
Projection factors (in percent): 1/									
Physician fees 2/									
Aged	0.9	-2.6	-1.4	0.6	-3.4	-2.5	1.2	-1.8	-0.4
Disabled	0.9	-2.6	-1.4	0.6	-3.4	-2.5	1.2	-1.8	-0.4
Utilization of physician services 3/									
Aged	8.4	8.7	11.1	7.9	7.2	7.3	8.9	10.2	14.9
Disabled	10.6	8.8	10.3	8.8	6.1	6.9	12.4	11.5	13.7
Outpatient hospital services per enrollee									
Aged	11.7	15.7	13.0	7.0	11.2	10.3	16.4	20.2	15.7
Disabled	7.8	15.5	7.9	2.9	9.3	1.3	12.7	21.7	14.5
	As of December 31,			As of December 31,			As of December 31,		
	1989	1990	1991	1989	1990	1991	1989	1990	1991
Actuarial status (in millions):									
Assets	$13,556	$15,482	$17,117	$13,556	$15,482	$19,726	$13,556	$15,482	$14,346
Liabilities	5,727	6,204	7,025	5,436	4,750	5,329	6,019	7,686	8,765
Assets less liabilities	$7,829	$ 9,278	$10,092	$8,120	$10,732	$14,397	$7,537	$7,796	$5,581
Ratio of assets less liabilities to expenditures (in percent) 4/	17.6	18.7	18.0	18.8	22.9	28.3	16.5	14.8	9.1

1/ Because of the manner in which alternative economic assumptions affect the projected operations of the SMI program, there is not a substantial difference in the projections based upon the three sets of assumptions. Therefore only one projection, alternative II, is presented here. Appendix A presents an explanation of the effects of alternative I and alternative III on the projections in the report.
2/ As recognized for payment under the program.
3/ Increase in the number of services received per enrollee and greater relative use of more expensive services.
4/ Ratio of assets less liabilities at the end of the year to total incurred expenditures during the following year, expressed as a percent.

CONCLUSION

The financing for the SMI program has been established through December 1991 by the setting of the standard monthly premium rate (paid by or on behalf of each enrollee) of $29.90 for CY 1991 and of actuarial rates that determine the amount to be contributed from general revenue on behalf of each enrollee. General revenue contributions are expected to account for 73.9 percent of all SMI income during CY 1991.

Under alternative II assumptions used in this report, income is projected to exceed disbursements during CY 1991. Income is composed of premiums paid by the enrollees, general revenue contributions, and interest earned by the trust fund. As a result, the assets in the trust fund on a cash basis are projected to increase from $15.5 billion at the end of CY 1990 to an estimated $17.1 billion at the end of CY 1991.

The financing for CY 1991 was established to reduce assets. However, Public Law 101-508 was enacted on November 5, 1990 after the financing had been established for CY 1991. As a net result of these measures, the excess of assets over liabilities is expected to increase from $9,278 million at the end of December 1990 to $10,092 million by the end of December 1991 representing 18.0 percent of the following year's projected incurred expenditures. Under more pessimistic assumptions as to cost increases, assets based on financing already established will still be sufficient to cover outstanding liabilities. Hence, the financing established through December 1991 is sufficient to cover projected benefit and administrative costs incurred through that time period, and to maintain a level of trust fund assets adequate to cover the impact of a moderate degree of variation between actual and projected costs.

Although the SMI program is actuarially sound, the Board notes with concern the rapid growth in the cost of the program. Growth rates have been so rapid that outlays of the program have nearly doubled in the past five years. For the same time period, the program grew 37 percent faster than the economy as a whole. This growth rate shows little or no sign of significantly abating despite recent efforts to control the cost of the program, including the recent changes enacted in OBRA 90. The Board recommends that Congress continue to curtail the rapid growth in the cost of the SMI program.

APPENDIX A

ACTUARIAL METHODOLOGY AND PRINCIPAL ASSUMPTIONS FOR COST ESTIMATES FOR THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM

1. ESTIMATES UNDER ALTERNATIVE II ASSUMPTIONS FOR AGED AND DISABLED (EXCLUDING ESRD) ENROLLEES

a. Introduction

Estimates under alternative II assumptions for aged and disabled enrollees--excluding disabled persons with ESRD--are prepared by calculating allowed charges incurred per enrollee in a recent year (the 12-month period ending June 30, 1989, for this report) and projecting these charges through the estimating period. The per enrollee charges are then converted to reimbursement amounts by subtracting the per enrollee values of the deductible and coinsurance. Aggregate reimbursement amounts are calculated by multiplying the per enrollee reimbursement amounts by the projected enrollment. In order to estimate cash disbursements, an allowance is made for the delay between receipt of service and payment therefor.

Disabled persons with ESRD have per enrollee costs which are higher and quite different in nature from those of most other disabled persons. Hence, program costs for them have been excluded from the analysis in this section and are included in a later section.

b. Establishing a Projection Base

(1) Physician Services

Reimbursement amounts for physician services (and smaller amounts for other services such as laboratory tests, durable medical equipment and supplies) are paid through organizations acting for HCFA, referred to as "carriers." The carriers determine whether billed services are covered under the program and determine the allowed charges for the services. A record of the amount reimbursed after reduction for coinsurance and the deductible is transmitted to the central office in the form of a "payment record."

Payment records for 0.1 percent of aged beneficiaries and 5.0 percent of disabled beneficiaries are tabulated by date of service, thus providing a data base which is constructed on an incurred basis. Certain minor adjustments are made to the tabulated sample data to correct for biases and random fluctuations inherent in the sampling process. Having the data on an incurred basis is necessary to meet the statutory requirement that the program be financed on this basis.

As a check on the validity of the projection base, incurred reimbursement amounts are compared with cash expenditures reported by the carriers through an independent reporting system. In a program with continuously increasing

incurred reimbursement amounts, cash payments are expected to be slightly lower than incurred expenses (except in the first year of coverage of a service or group of beneficiaries, when the difference should be substantial). These differences between cash and incurred reimbursement amounts occur because of the lag between receipt of services and payment therefor.

(2) Institutional and Other Services

Reimbursement amounts for institutional services under the SMI program are paid by the same fiscal intermediaries that pay for HI services. The principal institutional services covered under the SMI program are outpatient hospital care services.

Reimbursements for institutional services occur in two stages. Provider bills are submitted to the intermediaries, and interim payments are made on the basis of these bills. The bills are then submitted to the central office, and tabulations for a sample of beneficiaries are prepared in a manner parallel to that for payment records.

At the close of a provider's accounting period, a cost report is submitted, and lump-sum payments or recoveries are made to correct for the difference between interim payments made to the provider and the retroactively determined reasonable cost for providing covered services (net of coinsurance and deductible amounts). However, the cost of laboratory tests in outpatient departments of hospitals is no longer determined on a reasonable-cost basis but on a fee-schedule basis. The amounts of these retroactive settlements are reported on a cash basis, and approximations are necessary to allocate these payments to the time of service.

Group practice plans, which are not reimbursed through carriers, are reimbursed directly by HCFA on a reasonable cost or on a capitation basis. Comprehensive data on such direct reimbursements are available on a cash basis. Certain approximations must be made to allocate expenses to the period when services were rendered.

(3) Summary of Historical Data

Table A1 summarizes the incurred reimbursement amounts per enrollee for the various services for each of the 12-month periods ending June 30, through 1989. Also shown are average enrollment figures for these years. In order to analyze the historical trends in prices and use of services, these reimbursement amounts are converted to the allowed charges or reasonable costs on which reimbursement was based. This process is necessary largely because the fixed deductible becomes a smaller percentage of charges each year and thus causes reimbursement to rise faster than charges or costs. Table A2 shows the incurred charges or costs per enrollee corresponding to the reimbursement values shown in Table A1.

c. Per Enrollee Increases

(1) Physician Services

Per enrollee charges for physician services are affected by a variety of factors. One factor, increase in average charge per service, can be identified explicitly. Others can be recognized only by the fact that the increase in the average charge per service does not explain all of the increase in per enrollee charges year-to-year.

The increase in the average charge per service is one of the most important factors creating the increase in charges per enrollee. The physician fee component of the Consumer Price Index (CPI) provides an approximation of the historical increases in submitted charge per service. Increases in this index are shown in the first column of Table A3.

Bills submitted to the carriers during a specified period, the fee-screen year, are subject by statute to certain limitations on the level of fees to be allowed by the program for reimbursement purposes. The fee-screen-year period has changed over the history of the program. For 1984 and earlier, the fee-screen year was the 12-month period ending June 30. Beginning with 1987, the fee-screen year is on the calendar-year basis. Fee-screen years 1985 and 1986 were each 15-month periods allowing for the transition of the fee-screen years from the 12-month periods ending June 30 to the 12-month periods ending December 30. The fee level allowed for a particular service by a physician is subject to reduction if it exceeds the median charge that the physician assessed for the same service in the base period, the 12-month period ending 6 months prior to the beginning of the fee-screen year. This median charge is called the "customary charge." Fees are subject to further reduction if they exceed the prevailing charges for the locality. The prevailing charge is defined as the 75th percentile of customary charges for a particular service in a particular locality. Since July 1, 1975, the rate of increase in prevailing charges has been limited further by the application of the Medicare Economic Index. The customary and prevailing charge limits maintained by the carriers are called "fee screens." Allowed charges are charges after they have been reduced by the fee screens and are the charges on which reimbursement is based.

Public Law 101-239 provides for the replacement of customary and prevailing charges with fee schedules for physician services starting in CY 1992. The fee schedules will be based on a resource-based relative value scale. The fee schedule amount will be equal to the product of the procedure's relative value, a conversion factor and a geographic adjustment factor. Payments will be based on the lower of the actual charge and the fee schedule amount. For the four-year period from 1992 to 1995, the fee schedule amounts will be adjusted to reflect the prevailing charges in each fee screen area.

Certain services included with the physician services are not subject to the same fee-screen reduction process as described above. Beginning July 1, 1984 a unique fee schedule was established for laboratory tests performed in physician offices and independent laboratories. Since that time other unique fee schedules or reimbursement mechanisms have been established for other

services. The list of the services includes radiology, anesthesiology, certified registered nurse anesthetists, and durable medical equipment.

Since legislation has twice changed the time span of the fee-screen year, and since the two transitional fee-screen years (1985 and 1986) cover 15-month periods, data presented in Tables A1 through A9 will be displayed for the same 12-month basis for all years. This basis will be the 12-month periods ending June 30.

The average reduction in submitted fees has increased almost every year due both to administrative actions and to differentials in the rate of increase in fees between the period in which the fee screens are established and the period in which the screens are applied. The result is that the net increase in per enrollee charges due to price changes (i.e., the increase in fee levels allowed for reimbursement purposes) has been less than the increase in submitted fees. The second column of Table A3 shows this increase in per enrollee charges due to price changes.

Per capita charges also have increased each year as a result of a number of possible factors including more physician visits per enrollee, the aging of the Medicare enrollment, greater use of specialists and more expensive techniques, and certain administrative actions. The third column of Table A3 shows the increases in charges per enrollee resulting from these residual causes. Because the measurement of increased allowed charges per service is subject to error, this error is included implicitly under residual causes.

The last column of Table A3 shows the total increases in charges per enrollee for physician services. It includes the effects of all the items discussed above.

Projected increases in total allowed charges per enrollee are shown in Table A4. It compares with the corresponding historical data shown in Table A3. Column 1 of Table A4 shows the projected increases in the physician fee component of the CPI in each of the years ending June 30, 1990 through June 30, 2001. It represents an estimate of projected increases in the charges for all physician services (not only Medicare services). Column 2 shows the projected net increases in allowed charges, and column 3 shows the increases due to residual causes.

(2) Institutional and Other Services

The historical increases in charges and costs per enrollee for institutional and other services are shown in Table A5, and the projected increases are shown in Table A6. The year-to-year changes in some services have been quite erratic. At best, these series provide only a rough indication of future trends in costs.

d. Projected Charges and Costs

Table A7 shows projections of per enrollee incurred charges and costs based on the assumptions in Tables A4 and A6. Table A8 shows the total reimbursement amounts per enrollee that result from subtracting the average

amounts of copayment per enrollee from the total covered charges in Table A7. The aggregate reimbursement amounts shown are derived by multiplying average enrollment by average reimbursement per enrollee.

2. ESTIMATES UNDER ALTERNATIVE II ASSUMPTIONS FOR PERSONS SUFFERING FROM ESRD

Certain persons suffering from ESRD have been eligible to enroll for SMI coverage since July 1973 (under Section 2991 of Public Law 92-603). For analytical purposes, those enrollees suffering from ESRD who are also eligible as disability insurance beneficiaries are included in this section because their per enrollee costs are both higher and different in nature from those of most other disabled persons.

The alternative II estimates reflect the unique payment mechanism through which ESRD services are reimbursed under Medicare. Also, the estimates assume a continued increase in enrollment. The historical and projected enrollment and costs for SMI benefits are shown in Table A9.

3. SUMMARY OF AGGREGATE REIMBURSEMENT AMOUNTS ON A CASH BASIS UNDER ALTERNATIVE II ASSUMPTIONS

Table A10 shows aggregate historical and projected reimbursement amounts on a cash basis under alternative II assumptions, by type of beneficiary. The difference between reimbursement amounts on a cash basis and incurred reimbursement amounts results from the lag between the time of service and the time of payment.

4. ADMINISTRATIVE EXPENSES

The ratio of administrative expenses to benefit payments has been under 5 percent in recent years and is projected to decline in future years. Projections of administrative costs are based on estimates of changes in average annual wages.

5. CASH DISBURSEMENTS AS A PERCENT OF THE GNP

Cash disbursements (benefit payments and administrative expenses) for alternative I and III assumptions were developed by examining the alternative II cash disbursements as a percentage of GNP. Alternative I and III cash disbursements are assumed to be the same as alternative II through CY 1991. Beginning in CY 1992, the rate of growth of the alternative I cash benefits as a percentage of the GNP is assumed to be 2 percent less than the rate of growth of the alternative II benefits as a percentage of the GNP. Similarly, the rate of growth of the alternative III cash benefits as a percentage of the GNP is assumed to be 2 percent more than the rate of growth of the alternative II cash benefits as a percentage of the GNP. Projections of the administrative expenses for alternatives I and III are based on the estimates of the changes in average annual wage assumptions for alternative I and III, respectively. Based on the above methodology, cash disbursements as a percentage of the GNP were calculated for all three alternatives and are displayed in Table A11.

Table A1.--INCURRED REIMBURSEMENT AMOUNTS PER ENROLLEE: HISTORICAL

Year ending June 30,	Average enrollment (millions)	All services	Physician	Outpatient hospital	Home health agency	Group practice prepayment plan	Independent lab
Aged:							
1967	17.750	$ 62.51	$ 59.12	$ 1.41	$0.79	$ 0.89	$ 0.30
1968	18.038	80.06	74.47	2.40	1.69	1.35	0.35
1969	18.833	93.74	85.67	4.21	1.92	1.54	0.40
1970	19.312	99.91	90.03	5.91	1.99	1.50	0.48
1971	19.664	106.25	95.05	7.53	1.67	1.40	0.60
1972	20.043	116.22	101.63	8.55	1.60	1.66	0.78
1973	20.428	122.39	107.98	9.43	2.17	1.87	0.94
1974	20.988	134.38	117.48	11.32	2.03	2.35	1.20
1975	21.504	160.26	136.28	15.45	3.83	3.06	1.64
1976	22.089	188.60	156.27	21.26	5.19	3.86	2.02
1977	22.604	221.38	179.30	28.68	6.52	4.41	2.47
1978	23.133	254.19	207.05	33.38	6.82	4.02	2.92
1979	23.693	289.55	233.99	40.51	6.86	4.87	3.32
1980	24.287	343.02	277.24	47.10	7.58	7.04	4.06
1981	24.827	407.45	328.14	56.75	8.04	9.13	5.39
1982	25.363	465.33	381.02	66.40	0.52	10.92	6.47
1983	25.873	559.60	456.24	81.73	0.77	13.53	7.33
1984	26.433	637.33	512.88	97.32	0.99	16.84	9.30
1985	26.914	685.00	536.72	112.67	1.05	19.46	15.10
1986	27.453	785.15	595.96	135.03	1.19	31.71	21.26
1987	28.013	907.56	671.65	165.76	0.98	42.60	26.57
1988	28.467	1,021.01	741.92	186.19	1.53	61.43	29.94
1989	28.870	1,118.39	798.68	211.30	1.51	72.28	34.62
Disabled (excluding ESRD):							
1974	1.638	116.65	97.59	13.88	3.45	1.08	0.65
1975	1.817	149.42	125.62	17.31	3.57	1.86	1.06
1976	2.019	178.77	148.31	21.69	5.12	2.19	1.46
1977	2.231	220.45	174.81	36.44	4.79	2.41	2.00
1978	2.423	256.27	202.91	42.76	5.53	2.47	2.60
1979	2.563	301.57	240.73	50.49	5.13	2.05	3.17
1980	2.644	363.06	288.20	60.65	6.08	4.30	3.83
1981	2.691	434.37	340.15	77.10	7.21	5.22	4.69
1982	2.689	514.11	394.88	107.11	0.60	6.25	5.87
1983	2.630	629.08	485.46	128.76	0.00	7.55	7.31
1984	2.596	676.07	529.42	129.34	0.00	8.34	8.97
1985	2.594	708.52	553.22	132.35	0.00	9.27	11.68
1986	2.630	776.98	593.93	151.23	0.00	12.77	19.05
1987	2.679	857.09	660.83	166.92	0.00	16.19	23.15
1988	2.729	954.71	712.64	195.33	0.00	21.81	24.93
1989	2.771	1,013.40	747.65	212.28	0.00	24.95	28.52

Table A2.--INCURRED CHARGES OR COSTS PER ENROLLEE: HISTORICAL

Year ending June 30,	Average enrollment (millions)	All services	Physician	Outpatient hospital	Home health agency	Group practice prepayment plan	Independent lab
Aged:							
1967	17.750	$ 108.58	$102.70	$ 2.45	$1.37	$ 1.54	$ 0.52
1968	18.038	128.08	119.02	3.89	2.42	2.18	0.57
1969	18.833	145.18	132.22	6.77	3.08	2.47	0.64
1970	19.312	153.63	137.86	9.43	3.17	2.40	0.77
1971	19.664	162.10	144.41	11.89	2.64	2.21	0.95
1972	20.043	172.75	153.15	13.32	2.49	2.58	1.21
1973	20.428	186.21	163.99	14.79	3.02	2.94	1.47
1974	20.988	204.19	178.33	17.75	2.54	3.69	1.88
1975	21.504	236.59	201.27	23.51	4.66	4.66	2.49
1976	22.089	272.01	225.46	31.62	6.18	5.74	3.01
1977	22.604	313.23	253.83	41.77	7.60	6.43	3.60
1978	23.133	356.26	288.64	47.86	7.82	5.76	4.18
1979	23.693	398.80	322.19	57.28	7.76	6.88	4.69
1980	24.287	465.76	376.35	65.52	8.44	9.80	5.65
1981	24.827	545.32	438.85	77.76	8.81	12.51	7.39
1982	25.363	628.98	513.48	91.11	0.52	14.99	8.88
1983	25.873	754.99	614.97	110.94	0.77	18.36	9.95
1984	26.433	854.01	686.95	130.91	0.99	22.65	12.51
1985	26.914	909.85	715.63	151.47	1.05	26.16	15.54
1986	27.453	1,035.39	789.74	180.27	1.19	42.33	21.86
1987	28.013	1,188.68	884.01	219.62	0.98	56.44	27.63
1988	28.467	1,334.71	974.46	246.18	1.54	81.22	31.31
1989	28.870	1,449.81	1,040.18	277.08	1.51	94.78	36.26
Disabled (excluding ESRD):							
1974	1.638	171.06	143.27	20.99	4.17	1.64	0.99
1975	1.817	212.07	178.40	25.25	4.17	2.71	1.54
1976	2.019	250.18	207.77	31.24	5.90	3.16	2.11
1977	2.231	303.48	240.42	51.43	5.41	3.40	2.82
1978	2.423	349.58	276.50	59.80	6.19	3.45	3.64
1979	2.563	406.70	324.15	69.68	5.66	2.83	4.38
1980	2.644	483.87	383.58	82.60	6.62	5.86	5.21
1981	2.691	572.53	447.61	103.80	7.77	7.03	6.32
1982	2.689	683.34	522.79	144.23	0.00	8.41	7.91
1983	2.630	835.22	643.56	171.83	0.00	10.08	9.75
1984	2.596	896.47	701.39	172.06	0.00	11.09	11.93
1985	2.594	934.50	731.64	176.44	0.00	12.36	14.06
1986	2.630	1,019.77	782.53	200.72	0.00	16.75	19.57
1987	2.679	1,156.74	891.39	219.97	0.00	21.33	24.05
1988	2.729	1,245.82	933.45	257.55	0.00	28.76	26.06
1989	2.771	1,313.22	972.62	278.05	0.00	32.68	29.87

Table A3.--COMPONENTS OF INCREASES IN TOTAL ALLOWED CHARGES PER ENROLLEE FOR PHYSICIAN SERVICES: HISTORICAL
(In percent)

Year ending June 30,	Increase due to price changes: Increase in physician fee component of CPI	Increase due to price changes: Net increase in allowed fees	Residual factors	Total increase in allowed charges per enrollee
Aged:				
1967	7.6			
1968	5.9	4.8	10.6	15.9
1969	6.2	4.7	6.2	11.2
1970	6.7	3.9	0.4	4.3
1971	7.5	4.5	0.3	4.8
1972	5.2	3.9	2.0	6.0
1973	2.6	2.0	5.0	7.1
1974	5.0	3.2	5.4	8.8
1975	12.8	8.9	3.6	12.8
1976	11.4	8.2	3.5	12.0
1977	10.2	9.0	3.3	12.6
1978	8.9	9.0	4.3	13.7
1979	8.6	7.8	3.6	11.7
1980	11.5	8.6	7.6	16.8
1981	11.1	7.7	8.3	16.6
1982	9.9	10.8	5.6	17.0
1983	8.2	8.9	10.0	19.8
1984	7.5	7.2	4.2	11.7
1985	6.0	0.8	3.3	4.1
1986	6.7	0.3	10.0	10.3
1987	7.5	5.4	6.2	11.9
1988	7.2	3.1	6.9	10.2
1989	7.4	1.4	5.3	6.8
Disabled (excluding ESRD):				
1974	5.0			
1975	12.8	8.9	14.3	24.5
1976	11.4	8.2	7.6	16.4
1977	10.2	9.0	6.2	15.7
1978	8.9	9.0	5.5	15.0
1979	8.6	7.8	8.8	17.3
1980	11.5	8.6	9.0	18.3
1981	11.1	7.7	8.4	16.7
1982	9.9	10.8	5.4	16.8
1983	8.2	8.9	13.0	23.1
1984	7.5	7.2	1.6	8.9
1985	6.0	0.8	3.5	4.3
1986	6.7	0.3	6.6	6.9
1987	7.5	5.4	8.1	13.9
1988	7.2	3.1	1.6	4.7
1989	7.4	1.4	2.8	4.2

Table A4.--COMPONENTS OF INCREASES IN TOTAL RECOGNIZED CHARGES PER ENROLLEE FOR PHYSICIAN SERVICES: PROJECTED
(In percent)

Year ending June 30,	Increase due to price changes		Residual factors	Total increase in allowed charges per enrollee
	Increase in physician fee component of CPI	Net increase in allowed fees		
Aged:				
1990	7.1	0.9	8.4	9.4
1991	7.8	-2.6	8.7	5.9
1992	7.7	-1.4	11.1	9.5
1993	7.1	1.9	7.0	9.0
1994	8.0	1.6	7.5	9.2
1995	7.4	1.7	8.0	9.8
1996	6.6	2.0	7.9	10.1
1997	6.9	1.8	8.3	10.2
1998	7.0	1.5	8.3	9.9
1999	6.7	1.3	8.3	9.7
2000	6.0	1.3	8.3	9.7
2001	6.0	1.3	8.3	9.7
Disabled (excluding ESRD):				
1990	7.1	0.9	10.6	11.6
1991	7.8	-2.6	8.8	6.0
1992	7.7	-1.4	10.3	8.8
1993	7.1	1.9	5.7	7.7
1994	8.0	1.6	7.6	9.3
1995	7.4	1.7	8.0	9.8
1996	6.6	2.0	10.6	12.8
1997	6.9	1.8	9.0	11.0
1998	7.0	1.5	9.0	10.6
1999	6.7	1.3	9.0	10.4
2000	6.0	1.3	9.0	10.4
2001	6.0	1.3	9.0	10.4

Table A5.--INCREASES IN RECOGNIZED CHARGES AND COSTS PER ENROLLEE FOR INSTITUTIONAL AND OTHER SERVICES: HISTORICAL
(In percent)

Year ending June 30,	Outpatient hospital	Home health agency	Group practice prepayment plan	Independent lab
Aged:				
1968	58.8	76.6	41.6	9.6
1969	74.0	27.3	13.3	12.3
1970	39.3	2.9	-2.8	20.3
1971	26.1	-16.7	-7.9	23.4
1972	12.0	-5.7	16.7	27.4
1973	11.0	21.3	14.0	21.5
1974	20.0	-15.9	25.5	27.9
1975	32.5	83.5	26.3	32.4
1976	34.5	32.6	23.2	20.9
1977	32.1	23.0	12.0	19.6
1978	14.6	2.9	-10.4	16.1
1979	19.7	-0.8	19.4	12.2
1980	14.4	8.8	42.4	20.5
1981	18.7	4.4	27.7	30.8
1982	17.2	-94.1	19.8	20.2
1983	21.8	48.1	22.5	12.0
1984	18.0	28.6	23.4	25.7
1985	15.7	6.1	15.5	24.2
1986	19.0	13.3	61.8	40.7
1987	21.8	-17.6	33.3	26.4
1988	12.1	57.1	43.9	13.3
1989	12.6	-1.9	16.7	15.8
Disabled (excluding ESRD):				
1975	20.3	0.0	65.2	55.8
1976	23.7	41.5	16.6	37.0
1977	64.6	-8.3	7.6	33.8
1978	16.3	14.4	1.5	29.1
1979	16.5	-8.6	-18.0	20.3
1980	18.5	17.0	107.1	18.9
1981	25.7	17.4	20.0	21.3
1982	38.9	0.0	19.6	25.2
1983	19.1	0.0	19.9	23.3
1984	0.1	0.0	10.0	22.4
1985	2.5	0.0	11.5	17.9
1986	13.8	0.0	37.1	39.2
1987	9.6	0.0	25.8	22.9
1988	17.1	0.0	34.8	8.4
1989	8.0	0.0	13.6	14.6

Table A6.--INCREASES IN INCURRED CHARGES AND COSTS PER ENROLLEE FOR INSTITUTIONAL AND OTHER SERVICES: PROJECTED
(In percent)

Year ending June 30,	Outpatient hospital	Home health agency	Group practice prepayment plan	Independent lab
Aged:				
1990	11.7	10.0	18.6	15.6
1991	15.7	10.7	17.3	14.4
1992	13.0	9.4	15.3	17.2
1993	14.7	10.4	14.9	20.4
1994	15.0	10.6	15.0	20.3
1995	16.2	9.4	15.1	20.7
1996	17.6	10.9	15.0	20.3
1997	15.1	9.8	15.1	20.6
1998	15.1	9.8	15.1	20.6
1999	15.1	9.8	15.1	20.6
2000	15.1	9.8	15.1	20.5
2001	15.1	9.8	15.1	20.5
Disabled (excluding ESRD):				
1990	7.8	0.0	17.4	15.7
1991	15.5	0.0	12.4	13.7
1992	7.9	0.0	8.8	16.8
1993	11.3	0.0	9.1	17.3
1994	13.3	0.0	12.9	17.7
1995	14.4	0.0	12.5	20.0
1996	18.3	0.0	20.4	22.7
1997	14.3	0.0	15.1	20.3
1998	14.3	0.0	15.1	20.3
1999	14.3	0.0	15.1	20.3
2000	14.3	0.0	15.1	20.3
2001	14.3	0.0	15.1	20.3

Table A7.--INCURRED CHARGES OR COSTS PER ENROLLEE: PROJECTED

Year ending June 30,	All services	Physician	Outpatient hospital	Home health agency	Group practice prepayment plan	Independent lab
Aged:						
1990	$1,603.16	$1,137.82	$ 309.41	$1.66	$112.36	$ 41.91
1991	1,744.21	1,204.66	358.03	1.84	131.75	47.93
1992	1,934.09	1,319.41	404.53	2.01	151.97	56.17
1993	2,146.57	1,438.24	463.90	2.22	174.60	67.61
1994	2,388.91	1,570.65	533.71	2.46	200.75	81.34
1995	2,677.87	1,725.79	620.26	2.69	230.97	98.16
1996	3,016.30	1,900.34	729.32	2.98	265.56	118.10
1997	3,384.38	2,093.77	839.29	3.27	305.62	142.43
1998	3,793.09	2,300.22	965.85	3.59	351.72	171.71
1999	4,249.38	2,522.17	1,111.49	3.94	404.78	207.00
2000	4,764.33	2,765.54	1,279.09	4.33	465.84	249.53
2001	5,346.00	3,032.39	1,471.96	4.75	536.11	300.79
Disabled (excluding ESRD):						
1990	1,458.02	1,085.43	299.67	0.00	38.36	34.56
1991	1,578.56	1,150.04	346.11	0.00	43.11	39.30
1992	1,716.83	1,250.51	373.48	0.00	46.92	45.92
1993	1,867.87	1,347.12	415.71	0.00	51.17	53.87
1994	2,064.59	1,472.50	470.95	0.00	57.76	63.38
1995	2,290.38	1,618.48	538.85	0.00	65.01	76.04
1996	2,535.07	1,825.76	637.72	0.00	78.27	93.32
1997	2,956.56	2,025.42	728.77	0.00	90.10	112.27
1998	3,311.96	2,240.42	832.82	0.00	103.71	135.01
1999	3,706.94	2,473.48	951.73	0.00	119.38	162.35
2000	4,151.06	2,730.79	1,087.62	0.00	137.42	195.23
2001	4,650.72	3,014.86	1,242.91	0.00	158.18	234.77

Table A8.--INCURRED REIMBURSEMENT AMOUNTS: PROJECTED

Year ending June 30,	Average enrollment (millions)	Reimbursement amounts	
		Per enrollee	Aggregate (millions)
Aged:			
1990	29.311	$1,234.55	$ 36,186
1991	29.772	1,340.19	39,900
1992	30.228	1,495.83	45,216
1993	30.688	1,668.08	51,190
1994	31.138	1,864.60	58,060
1995	31.543	2,099.01	66,209
1996	31.903	2,373.60	75,725
1997	32.205	2,672.72	86,075
1998	32.437	3,005.12	97,477
1999	32.626	3,376.72	110,169
2000	32.823	3,796.42	124,610
2001	33.038	4,271.11	141,109
Disabled (excluding ESRD):			
1990	2.812	1,123.04	3,158
1991	2.874	1,211.90	3,483
1992	2.934	1,324.81	3,887
1993	2.993	1,447.04	4,331
1994	3.063	1,606.59	4,921
1995	3.142	1,796.31	5,644
1996	3.231	2,069.02	6,585
1997	3.328	2,329.63	7,753
1998	3.438	2,618.38	9,002
1999	3.556	2,940.10	10,455
2000	3.680	3,301.09	12,148
2001	3.801	3,708.50	14,096

Table A9.--ENROLLMENT AND INCURRED REIMBURSEMENT FOR END-STAGE RENAL DISEASE

Year ending June 30,	Average Enrollment (thousands)		Reimbursement (millions)	
	Disabled ESRD	ESRD Only	Disabled ESRD	ESRD Only
1974	4	8	$ 46	$ 91
1975	7	11	84	131
1976	11	13	137	163
1977	14	15	181	194
1978	16	16	231	231
1979	18	20	262	290
1980	19	23	303	368
1981	20	25	340	434
1982	22	28	374	483
1983	24	31	411	545
1984	27	34	369	493
1985	30	38	399	539
1986	32	41	430	595
1987	34	45	456	652
1988	35	49	490	738
1989	37	54	527	819
1990	40	57	582	908
1991	43	61	656	1,018
1992	45	65	725	1,116
1993	48	69	786	1,206
1994	50	72	852	1,307
1995	53	75	925	1,416
1996	55	78	1,012	1,548
1997	56	81	1,106	1,686
1998	58	83	1,202	1,829
1999	59	85	1,302	1,979
2000	60	86	1,412	2,142
2001	61	88	1,530	2,319

Table A10.--AGGREGATE REIMBURSEMENT AMOUNTS ON A CASH BASIS
(In millions)

Fiscal year *	Aged	Disabled (excluding ESRD)	Disabled ESRD and ESRD only	Total
Historical:				
1967	$ 664			$ 664
1968	1,390			1,390
1969	1,645			1,645
1970	1,979			1,979
1971	2,035			2,035
1972	2,255			2,255
1973	2,391			2,391
1974	2,537	$ 196	$ 141	2,874
1975	3,289	258	218	3,765
1976	4,037	346	289	4,672
T.Q.	1,078	109	82	1,269
1977	5,005	493	369	5,867
1978	5,785	617	450	6,852
1979	6,929	782	548	8,259
1980	8,485	973	686	10,144
1981	10,362	1,197	786	12,345
1982	12,404	1,495	907	14,806
1983	14,783	1,734	970	17,487
1984	16,803	1,772	898	19,473
1985	19,080	1,801	927	21,808
1986	22,070	2,070	1,029	25,169
1987	26,353	2,439	1,145	29,937
1988	29,799	2,639	1,244	33,682
1989	32,751	2,780	1,336	36,867
1990	38,840	3,156	1,502	41,498
Projected:				
1991	40,551	3,523	1,693	45,767
1992	46,105	3,950	1,867	51,922
1993	52,107	4,413	2,019	58,539
1994	59,173	5,017	2,189	66,379
1995	67,494	5,792	2,379	75,665
1996	77,055	6,803	2,598	86,456
1997	87,559	7,908	2,830	98,297
1998	99,142	9,181	3,068	111,391
1999	112,094	10,665	3,322	126,081
2000	126,816	12,385	3,598	142,799

* For 1967 through 1976, fiscal years cover the interval from July 1 through June 30; the three month interval from July 1, 1976, through September 30, 1976, is labeled "T.Q.", the transition quarter; fiscal years 1977-2000 cover the interval from October 1 through September 30.

Table A11.--SMI CASH DISBURSEMENTS AS A PERCENT OF THE GNP FOR CALENDAR YEARS 1990-2000 •

Calendar year	Alternatives		
	I	II	III
1990	0.81	0.81	0.81
1991	0.86	0.86	0.88
1992	0.89	0.91	0.95
1993	0.93	0.96	1.01
1994	0.97	1.03	1.09
1995	1.02	1.10	1.21
1996	1.07	1.18	1.31
1997	1.12	1.26	1.42
1998	1.17	1.34	1.55
1999	1.22	1.43	1.68
2000	1.27	1.52	1.83

• Disbursements are the sum of benefit payments and administrative expenses.

APPENDIX B

STATEMENT OF ACTUARIAL ASSUMPTIONS AND BASES EMPLOYED IN DETERMINING THE MONTHLY ACTUARIAL RATES AND THE MONTHLY PREMIUM RATE FOR THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM BEGINNING JANUARY 1991 *

1. ACTUARIAL STATUS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND

Under the law, the starting point for determining the monthly premium is the amount that would be necessary to finance the SMI program on an incurred basis; that is, the amount of income that would be sufficient to pay for services furnished during that year (including associated administrative costs) even though payment for some of these services will not be made until after the close of the year. The portion of income required to cover benefits not paid until after the close of the calendar year is added to the trust fund and used when needed.

The rates are established prospectively and are therefore subject to projection error. Additionally, legislation enacted after the financing has been established, but effective for the periods for which the financing has been set, may affect program costs. As a result, the income to the program may not equal incurred costs. Therefore, trust fund assets should be maintained at a level that is adequate to cover a moderate degree of variation between actual and projected costs in addition to the amount of incurred but unpaid expenses. Table B1 summarizes the estimated actuarial status of the trust fund as of the end of the financing period for 1989 through 1990.

2. MONTHLY ACTUARIAL RATE FOR ENROLLEES AGE 65 AND OLDER

The monthly actuarial rate is one-half of the monthly projected cost of benefits and administrative expenses for each enrollee age 65 and older, adjusted to allow for interest earnings on assets in the trust fund and a contingency margin. The contingency margin is an amount appropriate to provide for a moderate degree of variation between actual and projected costs and to amortize unfunded liabilities.

---

* This statement appeared in the Federal Register of February 27, 1991. However, it was originally approved September 27, 1990, and, since that date, it was modified to reflect the impact of section 4301 of the Omnibus Budget Reconciliation Act of 1990 (Public Law 101-508). This section legislated the premium rate for 1991. The other provisions of Public Law 101-508 are not reflected in this statement. Projections shown in this statement differ from the projections shown in the rest of the report because of changes in assumptions since the preparation of this statement.

The monthly actuarial rates for enrollees age 65 and older for calendar year 1991 was determined by projecting per-enrollee cost for the 12-month periods ending June 30, 1991 and June 30, 1992, by type of service. Although the actuarial rates are now applicable for calendar years, projections of per-enrollee costs were determined on a July to June period, consistent with the July annual fee screen update used for benefits prior to the passage of section 2308(b) of Public Law 98-369. The values for the 12-month period ending June 30, 1988, were established from program data. Subsequent periods were projected using a combination of program data and data from external sources. The projection factors used are shown in Table B2. Those per-enrollee values are then adjusted to apply to a calendar year period. The projected values for financing periods from January 1, 1988, through December 31, 1991, are shown in Table B3.

The projected monthly rate required to pay for one-half of the total of benefits and administrative costs for enrollees age 65 and over for CY 1991 is $64.76. The monthly actuarial rate of $62.60 provides an adjustment of -$1.46 for interest earnings and -$0.70 for a contingency margin. Based on current estimates, it appears that the assets are more than sufficient to cover the amount of incurred but unpaid expenses and to provide for a moderate degree of projection error. Thus, a negative contingency margin is needed to reduce assets toward a more appropriate level.

An appropriate level for assets depends on numerous factors. The most important of these factors are: (1) The difference from prior years in the actual performance of the program and estimates made at the time financing was established and (2) the expected relationship between incurred and cash expenditures. Ongoing analysis is made of the former as the trends in the differences vary over time.

3. MONTHLY ACTUARIAL RATE FOR DISABLED ENROLLEES

Disabled enrollees are those persons enrolled in SMI because of entitlement (before age 65) to disability benefits for more than 24 months or because of entitlement to Medicare under the end-stage renal disease program. Projected monthly costs for disabled enrollees (other than those suffering from end-stage renal disease) are prepared in a fashion exactly parallel to projection for the aged, using appropriate actuarial assumptions (see Table B2). Costs for the end-stage renal disease program are projected differently because of the complex demographic problems involved. The combined results for all disabled enrollees are shown in Table B4.

The projected monthly rate required to pay for one-half of the total of benefits and administrative costs for disabled enrollees for CY 1991 is $71.10. The monthly actuarial rate of $56.00 provides an adjustment of -$3.08 for interest earnings and a -$12.02 for a contingency margin. Based on current estimates, it appears that assets are more than sufficient to cover the amount of incurred but unpaid expenses and to provide for a moderate degree of variation between

actual and projected costs. Thus, a negative contingency margin is needed to reduce assets to more appropriate levels.

4. SENSITIVITY TESTING

Several factors contribute to uncertainty about future trends in medical care costs. In view of this, it seems appropriate to test the adequacy of the rates announced here using alternative assumptions. The most unpredictable factors that contribute significantly to future costs are outpatient hospital costs, physician residual (as defined in Table B2), and increases in physician fees as constrained by the program's reasonable charge screens and economic index. Two alternative sets of assumptions and the results of those assumptions are shown in Table B5. One set represents increases that are lower and is, therefore, more optimistic than the current estimate. The other set represents increases that are higher and is, therefore, more pessimistic than the current version. The values for the alternative assumptions were determined from a study on the average historical variation between actual and projected increases in the respective increase factors. All assumptions now shown in Table B5 are the same as in Table B2.

Table B5 indicates that, under the assumptions used in preparing this report, the monthly actuarial rates will result in an excess of assets over liabilities of $6,623 million by the end of December 1991. This amounts to 11.2 percent of the estimated total incurred expenditures for the following year. Assumptions which are somewhat more pessimistic (and, therefore, test the adequacy of the assets to accommodate projection errors) produce a deficit of $3,199 million by the end of December 1991, which amounts to 4.8 percent of the estimated total incurred expenditures for the following year. Under these more pessimistic assumptions, assets will be insufficient to cover outstanding liabilities. However, the cash balances in the trust fund should remain positive, allowing claims to be paid. Under fairly optimistic assumptions, the monthly actuarial rates will result in a surplus of $15,678 million by the end of December, 1991, which amounts to 29.9 percent of the estimated total incurred expenditures for the following year.

5. PREMIUM RATE

Section 4301 of Public Law 101-508 added section 1839(e)(1)(B)(i) to the Act, which provides that the monthly premium rate for 1991, for both aged and disabled enrollees, is $29.90.

Table B1.--ESTIMATED ACTUARIAL STATUS OF THE SMI TRUST FUND AS OF THE END OF THE FINANCING PERIODS, JANUARY 1, 1989--DECEMBER 31, 1990
(In Millions of Dollars)

Financing Period Ending	Assets	Liabilities	Assets Less Liabilities
December 31, 1989	$13,541	$4,566	$8,975
December 31, 1990	13,499	4,994	8,505

Table B2.-- PROJECTION FACTORS 1/
12-MONTH PERIODS ENDING JUNE 30 OF 1988-1992
(In percent)

12-month period ending June 30	Physicians' services		Outpatient hospital services	Home health agency services 4/	Group practice prepayment plans	Independent lab services
	Fees 2/	Residual 3/				
Aged:						
1988	2.4	7.0	12.6	56.1	45.4	18.2
1989	1.3	6.4	11.0	1.7	16.3	14.5
1990	0.7	11.0	15.2	10.9	15.0	19.9
1991	2.5	8.5	12.8	9.5	11.6	20.1
1992	3.4	8.2	12.9	8.9	15.0	20.5
Disabled:						
1988	2.4	1.4	17.2	0.0	41.9	9.3
1989	1.3	3.0	4.3	0.0	14.6	7.5
1990	0.7	9.4	12.0	0.0	15.0	15.2
1991	2.5	6.6	12.5	0.0	12.3	15.4
1992	3.4	6.6	12.3	0.0	15.1	14.4

1/ All values are per enrollee.
2/ As recognized for payment under the program.
3/ Increase in the number of services received per enrollee and greater relative use of more expensive services.
4/ Since July 1, 1981, home health agency services have been almost exclusively provided by the Medicare hospital insurance (HI) program. However, for those SMI enrollees not entitled to HI, the coverage of these services is provided by the SMI program. Since all SMI disabled enrollees are entitled to HI, their coverage of these services is provided by the HI program.

Table B3.--DERIVATION OF MONTHLY ACTUARIAL RATE FOR ENROLLEES AGE 65 AND OVER FINANCING PERIODS ENDING DECEMBER 31, 1988 THROUGH DECEMBER 31, 1991

	Financing Periods			
	CY 1988	CY 1989	CY 1990	CY 1991
Covered services (at level recognized):				
Physicians' reasonable charges	$41.94	$46.09	$51.40	$57.37
Outpatient hospital and other institutions	10.84	12.27	13.98	15.78
Home health agencies	0.06	0.07	0.08	0.08
Group practice prepayment plans	3.80	4.40	4.98	5.64
Independent lab	1.41	1.65	1.99	2.39
Total services	$53.05	$64.48	$72.43	$81.26
Cost-sharing:				
Deductible	-2.71	-2.72	-2.72	-2.68
Coinsurance	-10.83	-12.20	-13.80	-15.15
FY 1991 Sequester	0.00	0.00	0.00	-0.61
Total benefits	$44.51	$49.56	$55.91	$62.82
Administrative expenses	1.70	1.98	1.85	1.94
Incurred expenditures	$46.21	$51.54	$57.76	$64.76
Value of interest	-0.55	-1.09	-1.55	-1.46
Contingency margin for projection error and to amortize the surplus or deficit	3.94	5.35	0.99	-0.70
Monthly actuarial rate	$49.60	$55.80	$57.20	$62.60

Table B4.-- DERIVATION OF MONTHLY ACTUARIAL RATE FOR DISABLED ENROLLEES
FINANCING PERIODS ENDING DECEMBER 31,1988 THROUGH DECEMBER 31, 1991

	Financing Periods			
	CY 1988	CY 1989	CY 1990	CY 1991
Covered services (at level recognized):				
Physicians' reasonable charges	$42.24	$45.35	$49.83	$54.74
Outpatient hospital and other institutions	24.36	25.89	28.16	30.57
Home health agencies	0.00	0.00	0.00	0.00
Group practice prepayment plans	1.31	1.50	1.70	1.93
Independent lab	1.28	1.42	1.64	1.86
Total services	$69.19	$74.16	$81.33	$89.10
Cost-sharing:				
Deductible	-2.42	-2.43	-2.44	-2.45
Coinsurance	-13.19	-14.28	-15.73	-16.95
FY 1991 Sequester	0.00	0.00	0.00	-0.68
Total benefits	$53.58	$57.45	$63.16	$69.02
Administrative expenses	1.92	2.13	2.15	2.08
Incurred expenditures	$55.50	$59.58	$65.31	$71.10
Value of interest	-7.12	-6.60	-4.92	-3.08
Contingency margin for projection error and to amortize the surplus or deficit	0.22	-18.68	-16.29	-12.02
Monthly actuarial rate	$48.60	$34.30	$44.10	$56.00

Table B5.-- ACTUARIAL STATUS OF THE SMI TRUST FUND UNDER THREE SETS OF ASSUMPTIONS FOR FINANCING PERIODS THROUGH DECEMBER 31, 1991

	This projection			Low cost projection			High cost projection		
	12-Month period ending June 30,			12-Month period ending June 30,			12-Month period ending June 30,		
	1990	1991	1992	1990	1991	1992	1990	1991	1992
Projection factors (in percent):									
Physician fees 1/									
Aged	0.7	2.5	3.4	-0.1	1.5	1.6	1.5	3.5	5.2
Disabled	0.7	2.5	3.4	-0.1	1.5	1.6	1.5	3.5	5.2
Utilization of physician services 2/									
Aged	11.0	8.5	8.2	9.5	4.6	4.3	12.5	12.3	12.1
Disabled	9.4	6.6	6.6	6.7	3.3	4.3	12.1	10.0	8.8
Outpatient hospital services per enrollee									
Aged	15.2	12.8	12.9	10.7	10.1	8.6	19.7	15.5	17.2
Disabled	12.0	12.5	12.3	5.8	5.9	9.4	18.2	19.1	15.1
	As of December 31,			As of December 31,			As of December 31,		
	1989	1990	1991	1989	1990	1991	1989	1990	1991
Actuarial status (in millions):									
Assets	$13,541	$13,499	$12,739	$13,541	$15,869	$19,992	$13,541	$11,005	$4,798
Liabilities	4,566	4,994	6,116	3,259	3,495	4,314	5,893	6,529	7,997
Assets less liabilities	$ 8,975	$ 8,505	$ 6,623	$10,282	$12,374	$15,678	$ 7,648	$ 4,476	-$3,199
Ratio of assets less liabilities to expenditures (in percent) 3/	19.7	16.4	11.2	23.9	26.2	29.9	15.9	7.8	-4.8

1/ As recognized for payment under the program.
2/ Increase in the number of services received per enrollee and greater relative use of more expensive services.
3/ Ratio of assets less liabilities at the end of the year to total incurred expenditures during the following year, expressed as a percent.

APPENDIX C

STATEMENT OF ACTUARIAL OPINION

It is my opinion that (1) the methodology used herein is based upon sound principles of actuarial practice and (2) all the assumptions used and the resulting cost estimates are in the aggregate reasonable for the purpose of evaluating the actuarial and financial status of the Federal Supplementary Medical Insurance Trust Fund, taking into account the experience and expectations of the program.

Roland E. King
Fellow of the Society of Actuaries
Member of the American Academy of Actuaries
Chief Actuary,
Health Care Financing Administration